SAMSUNG

SPLIT-TYPE AIR CONDITIONER

	INDOOR UNIT	OUTDOOR UNIT
Model Code :	AR09HSFSJWKNCV	AR09HSFSJWKXCV
	AR12HSFSJWKNCV	AR12HSFSJWKXCV
	AR18HSFSJWKNCV	AR18HSFSJWKXCV
	AR24HSFSJWKNCV	AR24HSFSJWKXCV
Basic Code :	AR09HSFSHWKNCV	AR09HSFSHWKXCV
	AR12HSFSHWKNCV	AR12HSFSHWKXCV
	AR18HSFSHWKNCV	AR18HSFSHWKXCV
	AR24HSFSHWKNCV	AR24HSFSHWKXCV

SERVICE Manual

AIR CONDITIONER

AR09HSFSJWKXCV
AR12HSFSJWKXCV

AR18HSFSJWKXCV

AR24HSFSJWKXCV

CONTENTS

1. Precautions
2. Product Specifications
3. Alignment and Adjustments
4. Disassembly and Reassembly
5. Disassembly WIFI
6. Electrical Parts List
7. Wiring Diagram
8. PCB Diagram
9. Operating Instructions
10. Troubleshooting
11. Block Diagram
12. Reference Sheet

SAMSUNG

SPLIT-TYPE AIR CONDITIONER

	INDOOR UNIT	OUTDOOR UNIT
Model Code :	AR09HSFSJWKNCV	AR09HSFSJWKXCV
	AR12HSFSJWKNCV	AR12HSFSJWKXCV
	AR18HSFSJWKNCV	AR18HSFSJWKXCV
	AR24HSFSJWKNCV	AR24HSFSJWKXCV
Basic Code :	AR09HSFSHWKNCV	AR09HSFSHWKXCV
	AR12HSFSHWKNCV	AR12HSFSHWKXCV
	AR18HSFSHWKNCV	AR18HSFSHWKXCV
	AR24HSFSHWKNCV	AR24HSFSHWKXCV

SERVICE Manual

AIR CONDITIONER

AR09HSFSJWKXCV
AR12HSFSJWKXCV

AR18HSFSJWKXCV

AR24HSFSJWKXCV

CONTENTS

1. Precautions
2. Product Specifications
3. Alignment and Adjustments
4. Disassembly and Reassembly
5. Disassembly WIFI
6. Electrical Parts List
7. Wiring Diagram
8. PCB Diagram
9. Operating Instructions
10. Troubleshooting
11. Block Diagram
12. Reference Sheet

Contents

8. PCB Diagram **8-1**
- 8-1 Indoor Unit 8-1
- 8-2 Outdoor PCB 8-2
- 8-3 Wire connecting the indoor unit terminal blocks 8-8

9. Operating Instructions **9-1**
- 9-1 Name of Each Part 9-1
- 9-2 Wireless Remote Control-Buttons and Display 9-2

10. Troubleshooting **10-1**
- 10-1 Items to be checked first 10-1
- 10-2 Communication Error 10-2
- 10-3 PCB Inspection Method 10-37

11. Block Diagram **11-1**
- 11-1 Indoor unit 11-1
- 11-2 Outdoor unit 11-2

12. Reference Sheet **12-1**
- 12-1 Low Refrigerant Pressure Distribution 12-1
- 12-2 Pressure & Capacity mark 12-1
- 12-3 Q & A for Non-trouble 12-2
- 12-4 Cleaning /Filter Change 12-5
- 12-5 Installation 12-6
- 12-6 Installation Diagram of Indoor Unit and Outdoor Unit 12-7

Contents

1. Precautions 1-1

1-1 Installing the air conditioner 1-1
1-2 Power supply and circuit breaker 1-1
1-3 During operation 1-1
1-4 Disposing of the unit 1-2
1-5 Others 1-2

2. Product Specifications 2-1

2-1 The Feature of Product 2-1
2-2 Product Specifications 2-2
2-3 The Comparative Specifications of Product 2-6
2-4 Accessory and Option Specifications 2-8

3. Alignment and Adjustments 3-1

3-1 Test Mode 3-1
3-2 Outdoor LED Display Error and Check Method 3-2
3-3 Setting Option Setup Method 3-5
3-4 Setting Option Setup Method 3-9

4. Disassembly and Reassembly 4-1

4-1. Indoor Unit 4-1
4-2. Outdoor Unit 4-2

5. ASSY CONTROL 5-1

5-1 ASSY CONTROL IN 5-1
5-2 Assy Control Out 5-2

6. Electrical Parts List 6-1

6-1 INDOOR MAIN PCB 6-1
6-2 INDOOR SUB PBA 6-5
6-3 INDOOR SUB PBA 6-6
6-4 OUTDOOR MAIN PBA- 9K/12K 6-7
6-5 OUTDOOR MAIN PBA- 18K 6-13
6-6 OUTDOOR MAIN PBA- 24K 6-21
6-7 OUTDOOR MAIN PBA- 24K 6-25

7. Wiring Diagram 7-1

7-1 Indoor Unit 7-1
7-2 Outdoor Unit 7-2

1. Precautions

1-1 Installing the air conditioner

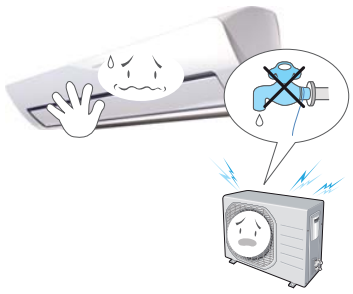
- Uses should not install the air conditioner by themselves.
  Ask the dealer or authorized company to install the air conditioner e□cept window-type air conditioner in U.S.A and Canada.
- If you don□t install the air conditioner properly, it may cause a fire, a water leakage or an electric shock.
- You must install the air conditioner according to the national wiring regulations and safety regulations.
- Install the indoor unit higher than 2.5m from the floor to avoid the injury caused by the operation of the fan.
  (e□cept the window-type air conditioner)
- The manufacturer is not responsible for any accidents or injury caused by an incorrect installation.
- When installing the built-in type air conditioner, keep all electric cables such as the power cable and the connection cord in pipes, ducts, or cable channels to protect them from the danger of impact or any other incidents.

1-2 Power supply and circuit breaker

- If the power cord of the air conditioner is damaged, it must be replaced by the manufacturer or a □ualified person in order to avoid a hazard.
- The air conditioner must be plugged into an independent circuit if applicable or connect the power cable to the au□iliary circuit breaker.
  An all pole disconnection form the power supply must be incorporated in the fi□ed wiring with a contact opening of>3mm.
- Do not e□tend an electric cord to the air conditioner.
- The air conditioner must be plugged in after you complete the installation.

1-3 During operation

- Do not repair the air conditioner at your discretion.
  It is recommended to contact a service center directly.
- Never spill any kind of li□uid on the air conditioner.
  If this happens, turn off the air conditioner and contact an authorized service center.
- Do not insert anything between the airflow blades to prevent damage of the inner fan and conse□uent injury.
  Keep children away from the air conditioner.
- Do not place any obstacles in front of the air conditioner.
- Do not spray any kind of li□uid into the indoor unit. If this happens, turn off the air conditioner and contact a service center.
- Make sure that the air conditioner is well ventilated at all times.
  Do not place a cloth or other materials over it.
- Remove the batteries if you don□t use the remote control for a long time. (If applicable)
- Use the remote control within 7 meters from the indoor unit. (If applicable)

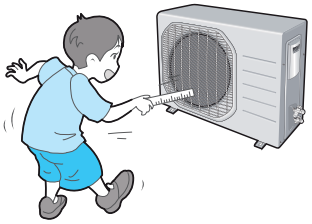


1-4 Disposing of the unit

- Before the throwing out the air conditioner, remove the batteries from the remote control.
- When you dispose of the air conditioner, consult your dealer. If pipes are removed incorrectly, refrigerant may blow out and cause air pollution. When it contacts with your skin, it can cause skin injury.
- The package of the air conditioner should be recycled or disposed of properly for environmental reasons.

1-5 Others

- Never store or load the air conditioner upside down or sideways to prevent the damage to the compressor.
- Young children or infirm persons should be always supervised when they use the air conditioner.
- Ma current is measured according to IEC standard for safety.
- Current is measured according to ISO standard for energy efficiency.



2. Product Specifications

2-1 The Feature of Product

■ 2 step cooling
- Get cool quickly and keep cool comfortably without shivering

■ Single user mode
- No worrying about the electricity bill, even using it when you're alone.

■ Crystal gloss design
- Uniquely stylish and innovative design to enhance your life and home

■ Smart Wi-Fi
- Control air conditioner anytime and anywhere

■ Smart Installation
- Get the confidence that it's perfectly installed

■ Smart Installation
- Get the confidence that it's perfectly installed

■ Smart Check
- Don’t worry about the trouble-shooting in your home

■ Triple Protector Plus
- Use longer without damage in unsuitable conditions

■ Easy Installation
- Secure the easy Installation of Indoor unit and pipe connection

■ Easy Filter
- Quick and easy to clean filter saves time and effort

2-2 Product Specifications

				0		12		1		24	
T pe				Wa -mounte		Wa -mounte		Wa -mounte		Wa -mounte	
Per ormance	Capacit	Coo in	KW	0. /2.64/3.20		0. /3.52/4.00		1.6/5.275/7.00		2.60/6.448/ .30	
		Heatin	(Low /St /Max)	0. /3.52/5.20		0. /3. /6.00		1.2/6.04/8.00		2.2/7. 13/12.00	
	Runnin Fre uenc	Coo in	H	15/38/45		15/53/67		15/47/73		15/41/6	
		Heatin	(Low /St /Max)	15/55/82		15/63/103		15/54/72		15/46/75	
	Noise	Coo in	B (H/L)	45/44		47/45		46		50/4	
		Heatin		51		53		57		60	
	Ener E icienc Ratio	Coo in	W/W (St)	4.4		4.3		3.88		3.58	
		Heatin		4		4.5		3.7		3.14	
	Pow er		p -V-H	1p ase, 208-230V , 60H		1p ase, 208-230V , 60H		1p ase, 208-230V , 60H		1p ase, 208-230V , 60H	
Pow	Pow er Consumtion	Coo in	W (Low /St /Max)	220/600/700		220/880/1150		380/1360/2200		600/1800/3150	
		Heatin		1 0/880/1400		1 0/1060/1800		300/1630/2100		480/2520/4200	
	Operatin Current	Coo in	A (Low /St /Max)	1.5/2. /3.2		1.5/4.1/5.3		1.8/6.2/ .7		3.2/8.3/14.0	
		Heatin		1.3/4.1/6.5		1.3/4. /8.3		1.5/7.3/10.5		2.6/11.5/1 .0	
	Pow er Factor	Coo in	(St)	85		85		0		0	
		Heatin		85		85		0		0	
Si e	Outer Dimension	Wi t *Hei t *Dept	mm	56*317*335	26*640*384	56*317*335	26*640*384	1123*354*384	1023* 11*413	1123*354*384	1051*1045*417
	Wei t(Net)			11	37	11	37	14	53	14	71.5
	Re ri erant Pipe	Li ui	mm	6.35		6.35		6.35		6.35	
		Gas	mm	.52		.52		.52		.52	
	Drain Hose		L*D	550*20		550*20		550*20		550*20	
	Compressor	T pe		UG T115FUAE SS		UG T115FUAE SS		UG4T200FUAE4SS		UG8T300FUBJUSS	
		Motor	T pe	-		-		-		-	
			Rate Output(W)	-		-		-		-	
	Oi T pe			-		-		-		-	
	B ow er	T pe		Cross- ow	Prope er	Cross- ow	Prope er	Cross- ow	Prope er	Cross- ow	Prope er
		motor	T pe	Resin/stee /AC	Resin/stee /AC	Resin/stee /AC	Resin/stee /AC	Resin/stee /AC	Resin/stee /AC	Resin/stee /AC	Resin/stee /AC
			Rate Output(W)	-	-	-	-	-	-	-	-
Heat Exc an er				2Row 14Step 1Row 10Step	2Row 24Step	2Row 14Step 1Row 10Step	2Row 24Step	2Row 16Step 1Row 12Step	2Row 36Step	2Row 16Step 1Row 12Step	2Row 42Step
Re ri erant Contro Unit				EEV		EEV		EEV		EEV	
Free er Oi Capacit			cc	-		-		-		-	
Re ri erant to C an e(R410A)				1250		1250		2000		2300	
Proterction Device(OLP)				None		None		None		None	
Operation con ition ran e	Coo in			-10 46℃		-10 46℃		-10 46℃		-10 46℃	
	Heatin			-15 24℃		-15 24℃		-15 24℃		-15 24℃	

2-3 The Comparative Specifications of Product

ITEM	MODEL	Deve op Mo e			
		AR0 HSFSJWK/CV	AR12HSFSJWK/CV	AR18HSFSJWK/CV	AR24HSFSJWK/CV
Desi n	In oor Unit				
	Out oor Unit				
Net Wei t	In oor Unit	11	11	14	14
	Out oor Unit	37	37	53	71.5
Outer Dimension	In oor Unit	56*317*335	56*317*335	1123*354*384	1123*354*384
	Out oor Unit	26*640*384	26*640*384	1023* 11*413	1051*1045*417
Noise	In oor Unit	45	47	46	50
	Out oor Unit	51	53	57	60
Air Puri in S stem	Fi ter	FULL HDFILTER	FULL HDFILTER	FULL HDFILTER	FULL HDFILTER

2-4 Accessory and Option Specifications

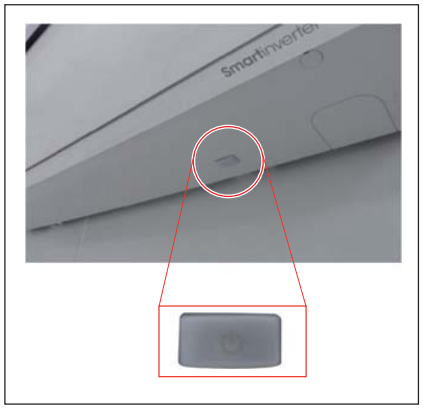
Item	Descriptions	Code-No.	QTY	Remark
	Installation Plate ✳✳09/12✳ (04 frame)	DB90-07732A	1	Indoor unit case
	Installation Plate ✳18/24/30✳ (05 frame)	DB90-07731A	1	
	Remote controller	DB93-14195G	1	
	Batteries for Remote controller	4301-000121	2	
	User's & Installation Manual	DB68-04405A	1	
	Wi-Fi Manual	DB68-04419A	1	
	Remote Control Holder	–	–	
	M4x10 Tapped Screws	DB97-23032A	2	
	M4 x 16 Tapped Screws	DB97-11984A	2	
	Drain Plug	DB67-20011A	1	Outdoor unit case
	Rubber Leg	DB73-20134A	4	

3. Alignment and Adjustments

3-1 Test Mode

■ How to Approach Test Mode

You can approach the test mode by pressing the on/off switch of indoor unit for 5 seconds.



■ Test mode operation option

After installing the air conditioner, check whether each subordinate is normally operated or not by operating the test mode.

- **When an Error occurs, display the Error Mode.**
- **Operation Mode :** Cool mode. operate the cool mode by operating the compressor by force without the compressor ON/OFF according to the set temperature/indoor temperature. (Do not follow the antifreeze control)
- **Up-down louver :** Up-down swing mode
- **Indoor Fan :** Turbo

Note

- Because the teat mode operate the cool mode by force not related to the set temperature / indoor temperature, check whether each subordinate is operated normally or not after completing installation and must turn off the power of the air conditioner.

3-2 Display Error and Check Method

3-2-1 Indoor Display Error and Check Method

ERROR MODE	DESCRIPTION
E101 / E102	Communication Error (Indoor or Outdoor)
E121	ROOM TH sensor error
E122	INDOOR MID, INDOOR IN PIPE-TH sensor error
E154	Fan Error (Indoor)
E162	EEPROM Error (Indoor)
E163	Option Error
E203	Time out Comm. (Inv Micom↔Main Micom)
E221	OUT-TH(Outdoor Temperature) Sensor Error
E231	CON-TH(Cond Temperature) Sensor Error
E251	DIS-TH(Discharge Temperature) Sensor Error
E416	DIS-TH(Discharge Temperature) Over Error
E422	EEV or Valve Close error-Self diagnosis
E440	Prohibit Operation Condition Error (Heating)
E441	Prohibit Operation Condition Error (Cooling)
E458	Fan Error(Outdoor)
E461	Comp Starting Error
E462	AC Input I_Limit Trip Error
E464	IPM Over Current(O.C) Error
E465	Comp V_limit/I_limit Error
E466	DC-Link Voltage Under/Over Error
E467	Comp Wire Missing Error
E468	Current Sensor Error
E469	DC-Link Voltage Sensor Error
E470	EEPROM Data Error (no data)
E471	EEPROM Data Error (Main Micom↔Inv Micom)
E474	Heatsink Sensor Error
E483	Over Voltage Protection Error
E484	PFC Over Load Error
E485	Input Current Sensor Error
E488	AC Input Voltage Sensor Error
E500	Heatsink Over Temperature Error
E554	Gas Leak Error

ERROR MODE				DESCRIPTION
7-SEG	LED1	LED2	LED3	
	OPERATION	TIMER	OPTION	
E101,E102	○	◑	◑	Communication error (indoor <-> outdoor)
E121	○	◑	○	ROOM TH sensor error
E122,E123	◑	◑	○	INDOOR MID,INDOOR IN PIPE-TH sensor error
E154	○	○	◑	Fan error(indoor)
E162	◑	◑	◑	EEPROM error
E163	◑	◑	◑	Option error
FROM E200	◑	○	◑	Outdoor error display
E422	●	○	◑	EEV or Valve Close error-Self diagnosis

● : LAMP ON ○ : LAMP OFF ◑ : LAMP BLINK

* Note *

If the Set doesn't work (No power), check the Thermal fuse of Terminal block OPEN or SHORT with Multimeter.

* Measure the Thermal fuse housing PIN#1 ~ 2 :
OPEN(disconnection) -> defective product

Outdoor LED Display Error and Check Method (9K/12K)

LED PATTERN			DESCRIPTION
YEL	GRN	RED	
○	○	○	Power off/VDD NG
●	●	●	Power ON reset(1sec)
○	⊙	●	Normal Operation
○	○	●	Abnormal Communication (Indoor↔Outdoor)
○	●	●	
○	○	⊙	IPM Over Current(O.C) Error
○	⊙	○	Comp Starting Error
○	●	○	EEPROM Data Error (no data)
○	●	⊙	DC-Link Voltage Under/Over Error
			PFC Over Load Error
			Over Voltage Protection Error
⊙	○	⊙	OUT-TH(Outdoor Temperature) Sensor Error
⊙	○	●	DIS-TH(Discharge Temperature) Over Error
⊙	⊙	○	DIS-TH(Discharge Temperature) Sensor Error
⊙	⊙	●	Current Sensor Error
			Heatsink Sensor Error
			Input Current Sensor Error
⊙	●	○	Comp V_limit/I_limit Error
			Heatsink Over Temperature Error
⊙	●	⊙	CON-TH(Cond Temperature) Sensor Error
⊙	●	●	Time out Comm. (Inv Micom↔Main Micom)
●	○	○	Fan Error(Outdoor)
●	○	⊙	EEPROM Data Error (Main Micom↔Inv Micom)
●	○	●	Comp Wire Missing Error
●	⊙	○	Prohibit Operation Condition Error (Heating)
			Prohibit Operation Condition Error (Cooling)
●	⊙	⊙	DC-Link Voltage Sensor Error
			AC Input Voltage Sensor Error
●	⊙	●	AC Input I_Limit Trip Error
●	●	○	Gas Leak Error
			EEV or Valve Close error-Self diagnosis
○	⊙	⊙	Test Operation at Cooling Mode
⊙	⊙	⊙	Test Operation at Heating Mode

● LED ON, ○ LED OFF, ⊙ LED BLINKING

Outdoor LED Display Error and Check Method (18K/24K/30K)

LED PATTERN			DESCRIPTION
YEL	GRN	RED	
○	○	○	Power off/VDD NG
○	○	⊙	IPM OVER CURRENT (O.C)
○	○	●	ABNORMAL SERIAL COMMUNICATION (DISPLAY BOARD : INDOOR ↔ OUTDOOR)
○	●	●	
○	⊙	●	NORMAL OPERATION
○	⊙	○	COMP STARTING ERROR
○	●	⊙	DC-LINK VOLTAGE UNDER/OVER ERROR
			PFC OVERLOAD/H/W/ DC LINK OVER
⊙	○	⊙	OUT-TH(OUTDOOR TEMPERATURE) SENSOR ERROR
⊙	○	●	DIS-TH(DISCHARGE TEMPERATURE) OVER ERROR
⊙	⊙	○	DIS-TH(DISCHARGE TEMPERATURE)SENSOR ERROR
⊙	⊙	●	CURRENT SENSOR ERROR
			HEAT SINK SENSOR/INPUT CURRENT SENSOR ERROR
⊙	●	○	COMP V LIMIT ERROR
			HEAT SINK OVER HEAT
⊙	●	⊙	COIL TEMP SENSOR SENSOR ERROR (DUAL/SINGLE)
⊙	●	●	1 MIN TIME OUT COMM (MAIN MICOM INV MICOM)
○	●	○	EEPROM DATA ERROR
●	○	○	FAN ERROR
●	○	⊙	OTP ERROR
●	○	●	COMP ROTATION ERROR
●	⊙	○	OPERATION CONDITION SECESSION (DUAL ONLY)
●	⊙	⊙	DC-LINK VOLTAGE SENSOR ERROR/ INPUT VOLTAGE SENSOR ERROR
●	⊙	●	I-TRIP ERROR/PFC OVER CURRENT
●	●	○	GAS LEAK/EEV OR VALVE ERROR-SELF DIAGNOSIS/HIGH PRESSION BLOCK
●	●	⊙	AC LINE ZERO CROSS SIGNAL OUT
●	●	●	POWER ON RESET (1SEC)
⊙	○	○	CAPACITY MISS MATCH
○	⊙	⊙	TEST OPERATION COOLING MODE
⊙	⊙	⊙	TEST OPERATION HEATIN G MODE

● LED ON, ○ LED OFF, ⊙ LED BLINKING

3-3 Setting Option Setup Method

e) Option No. :

Note :

SEG1, SEG7, SEG13, SEG19 need not to be pressed in, so in fact the Option No. we should press in is as below.

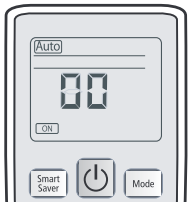
30 00 07 C2 6C 83 10 00 00 00 20 00 00 00 00 00 00 10 00 00

SEG1	SEG2	SEG3	SEG4	SEG5	SEG6	SEG7	SEG8	SEG9	SEG10	SEG11	SEG12	SEG13	SEG14	SEG15	SEG16	SEG17	SEG18	SEG19	SEG20	SEG21	SEG22	SEG23	SEG24
0	3	0	0	0	0	1	7	C	2	6	C	2	8	3	1	0	0	3	0	0	0	0	0
SEG25	SEG26	SEG27	SEG28	SEG29	SEG30	SEG31	SEG32	SEG33	SEG34	SEG35	SEG36	SEG37	SEG38	SEG39	SEG40	SEG41	SEG42	SEG43	SEG44	SEG45	SEG46	SEG47	SEG48
0	2	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	1	3	0	0	0	0	0

Step 1

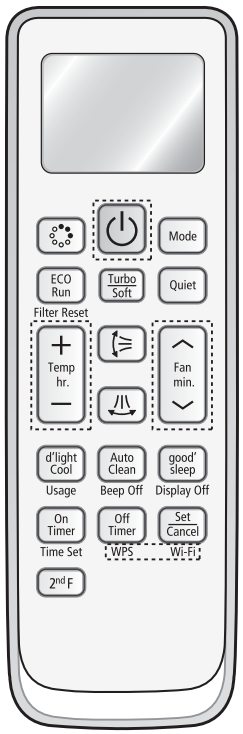
Enter the Option Setup mode.

1. Tack out the batteries of remote control.
2. Press the temperature (+ Temp −) button simultaneously and insert the battery again.
3. Make sure the remote control display shown as 00.

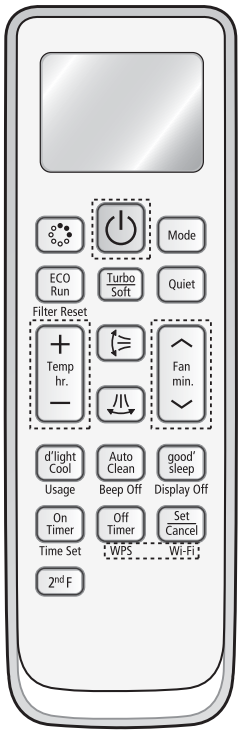


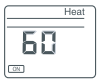
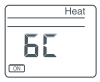
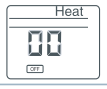
Step 2

Enter the Options Setup mode and select your options asscording to the following procedure.



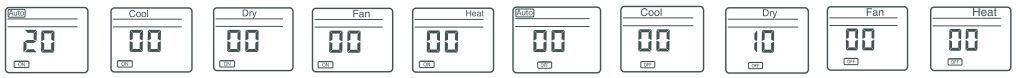
	Feature	Display
1	The default value is 00. Every time you push the Mode button, the display panel reads ON Auto ➡ Cool ➡ Dry ➡ Fan ➡ Heat , OFF Auto ➡ Cool ➡ Dry ➡ Fan ➡ Heat repeatedly.	Auto 00 ON
2	Push the Temp button to set the display panel to 3. Every time you push the Temp button, the display panel reads 0➡1➡2➡3➡ ..... ➡9➡A➡b➡c➡d➡E➡F repeatedly.	Auto 30 ON
3	Push the Mode button to Cool 00. Every time you push the Temp button, the display panel reads 0➡1➡2➡3➡ ..... ➡9➡A➡b➡c➡d➡E➡F repeatedly.	Cool 00 ON
4	Push the Mode button to Dry 00. Push the Temp button to set the display panel to 7. Every time you push the Temp button, the display panel reads 0➡1➡2➡3➡ ..... ➡9➡A➡b➡c➡d➡E➡F repeatedly.	Dry 07 ON
5	Push the Mode button to Fan 00. Push the Temp button to set the display panel to C. Every time you push the Temp button, the display panel reads 0➡1➡2➡3➡ ..... ➡9➡A➡b➡c➡d➡E➡F repeatedly.	Fan C0 ON
6	Push the Temp button to set the display panel to 2. Every time you push the Temp button, the display panel reads 0➡1➡2➡3➡ ..... ➡9➡A➡b➡c➡d➡E➡F repeatedly.	Fan C2 ON



	Feature	Display
7	Push the Mode button to . Push the Fan button to set the display panel to 6. Every time you push the Fan button, the display panel reads 0→1→2→3→ ..... →9→A→b→c→d→E→F repeatedly.	
8	Push the Fan button to set the display panel to 8. Every time you push the Fan button, the display panel reads 0→1→2→3→ ..... →9→A→b→c→d→E→F repeatedly.	
9	Push the Mode button to . Push the Fan button to set the display panel to 8. Every time you push the Fan button, the display panel reads 0→1→2→3→ ..... →9→A→b→c→d→E→F repeatedly.	
10	Push the Fan button to set the display panel to 3. Every time you push the Fan button, the display panel reads 0→1→2→3→ ..... →9→A→b→c→d→E→F repeatedly.	
11	Push the Mode button to . Push the Fan button to set the display panel to 1. Every time you push the Fan button, the display panel reads 0→1→2→3→ ..... →9→A→b→c→d→E→F repeatedly.	
12	Push the Mode button to .	
13	Push the Mode button to .	
14	Push the Mode button to .	

Step 3 Upon completion of the selection, check you made right selections.

Press the Mode (Mode) Selection key to set the display part and check the display part.
→ The display part shows like below when each time you press Mode button.

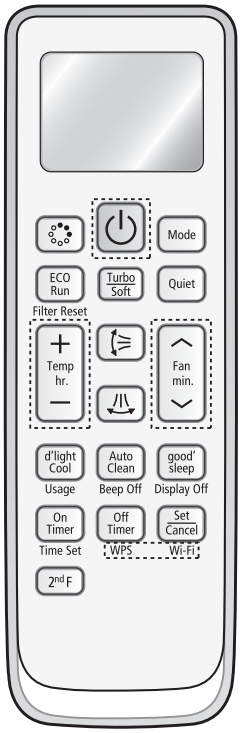


Step 4 Pressing the ON/OFF button ( ) .

When pressing the operation ON/OFF key with the direction of remote control for unit, the sound "Ding" or "Diriring" is heard and the OPERATION ICON(≡) lamp of the display is flickering at the same time, then the input of option is completed.
(If the deriving sound isn't heard, try again pressing the ON/OFF button.)

Step 5

Enter the Options Setup mode and select your options asscording to the following procedure.



	Feature	Display
1	Step 1 (Enter the Option Setup mode) is executed. (Seg25 ~ 48 for setting remote control Setup)	
2	Push the Mode button to set the display panerl to 2. Every time you push the button, the display panel reads 0 → 1 → 2 → 3 →··· 9 → A → b → c → d → E → F repeatedly.	
3	Push the Mode button to	
4	Push the Mode button to	
5	Push the Mode button to	
6	Push the Mode button to	
7	Push the Mode button to .	
8	Push the Mode button to .	
9	Push the Mode button to .	
10	Push the Mode button to set the display panerl to 1. Every time you push the button, the display panel reads 0 → 1 → 2 → 3 →··· 9 → A → b → c → d → E → F repeatedly.	
11	Push the Mode button to .	
12	Push the Mode button to .	

Step 6 **Upon completion of the selection, check you made right selections.**

Press the Mode (Mode) Selection key to set the display part and check the display part.
→ The display part shows like below when each time you press Mode button.

Step 7 **Pressing the ON/OFF button ( ) .**

When pressing the operation ON/OFF key with the direction of remote control for unit, the sound "Ding" or 'ring"
and the OPERATION ICON(≡) lamp of the display is flickering at the same time, then the input of option is completed.
(If the deriving sound isn't heard, try again pressing the ON/OFF button.)

Step 8 **Unit operation test-run.**

First : Remove the battery from the remote control.
Second : Re-insert the battery into the remote control.
Third : Press ON/OFF key with the direction of remote control for set.

■Error mode

1. If all lamps of indoor unit are flickering, Plug out, plug in power plug again and press ON/OFF key to retry.
2. If the unit is not working properly or all lamps are continuously flickering after setting the option code, the correct option code is set up for its model.

□**Option Items**

Model	SEG 1-6	SEG 7-12	SEG 13-18	SEG 19-24	SEG 25-30	SEG 31-36	SEG 37-42	SEG 43-48	SEG 49-54	SEG 55-60	SEG 61-66	SEG 67-72
AR09HSFSJWK/CV	010025	176A69	271920	372534	020000	100000	200001	300000	033F38	102637	200000	300000
AR12HSFSJWK/CV	010025	166A7A	272328	374634	020000	100000	200001	300000	03453A	10353F	200000	300000
AR18HSFSJWK/CV	010025	176A38	27323C	371634	020000	100000	200001	300000	033B44	112F36	200000	300001
AR24HSFSJWK/CV	010025	156A7D	274650	372734	020000	100000	200001	300000	033942	11292E	200000	300000

Step 6 Upon completion of the selection, check you made right selections.

Press the Mode (Mode) Selection key to set the display part and check the display part.
→ The display part shows like below when each time you press Mode button.

Step 7 Pressing the ON/OFF button ( ).

When pressing the operation ON/OFF key with the direction of remote control for unit, the sound "Ding-Ding" or and the OPERATIONIC ON(≡) lamp of the display is flickering at the same time, then the input of option is completed. (If the deriving sound isn't heard, try again pressing the ON/OFF button.)

Step 8 Unit operation test-run.

First Remove the battery from the remote control.
Second: Re-insert the battery into the remote control.
Third: Press ON/OFF key with the direction of remote control for set.

■ Error mode

1. If all lamps of indoor unit are flickering, Plug out, plug in power plug again and press ON/OFF key to retry.
2. If the unit is not working properly or all lamps are continuously flickering after setting or the option code is set up for its model.

□ **Option Items**

Model	SEG 1-6	SEG 7-12	SEG 13-18	SEG 19-24	SEG 25-30	SEG 31-36	SEG 37-42	SEG 43-48	SEG 49-54	SEG 55-60	SEG 61-66	SEG 67-72
AR09HSFSJWK/CV	010025	176A69	271920	372534	020000	100000	200001	300000	033F38	102637	200000	300000
AR12HSFSJWK/CV	010025	166A7A	272328	374634	020000	100000	200001	300000	03453A	10353F	200000	300000
AR18HSFSJWK/CV	010025	176A38	27323C	371634	020000	100000	200001	300000	033B44	112F36	200000	300001
AR24HSFSJWK/CV	010025	156A7D	274650	372734	020000	100000	200001	300000	033942	11292E	200000	300000

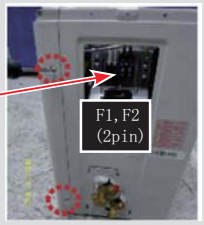
3-4 EEPROM Download (485 communication model)

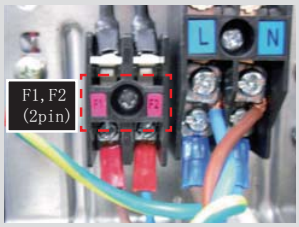
■ Method#1 : Using Communication line

1) Power off

2) Take off the side cover

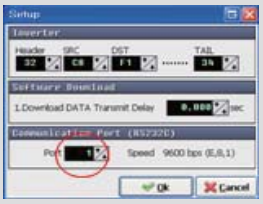
3) Connect PC-Download Jig-PBA



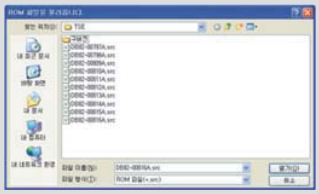


4) Execute the Inverter Download program

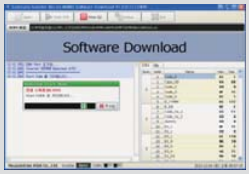
5) Select COM Port and connect



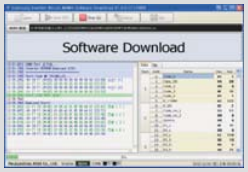
6) Open the file (*.src)



7) Click the Start button and reset the power

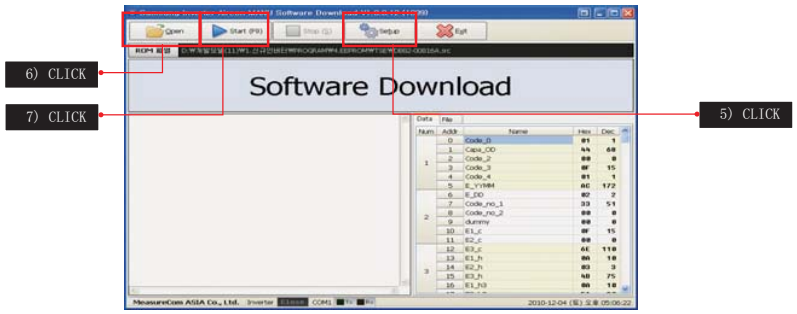


Reset
power



Waiting down load

Download

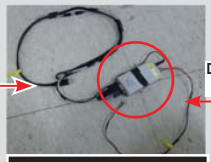


■ Method#2 : Using Serial line

1) Power off

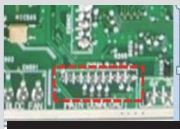
2) Take off the Cabinet : Check the LED off

3) Connect PC-Download Jig-PBA



RS 232 to Serial Download Converter

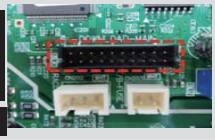
Download connector (10pin)



PIN# 1:RXD, 2:TXD, 9:GND, 10:VCC

Download connector (10pin,Black)
1)DB41-01010A : CN201
2)DB41-01129A : CN201
3)DB41-01023A : CN512
4)DB41-01081B : CN37

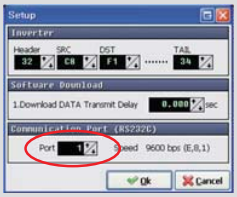
Download connector (20pin, Black)
1)DB41-01227A : CN201
2)DB41-01228A : CN201



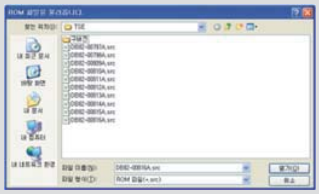
PIN# 1:RXD, 2:TXD, 9:GND, 10:VCC

4) Execute the Inverter Download program

5) Select COM Port and connect



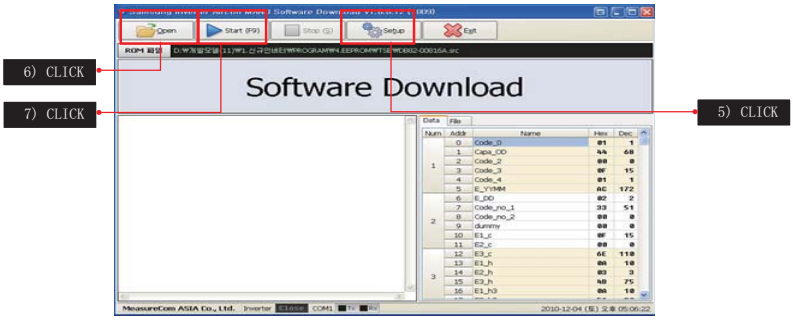
6) Open the file(*.src)



7) Click the Start button

Waiting down load

Download

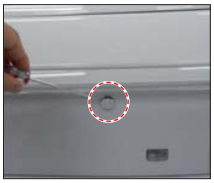
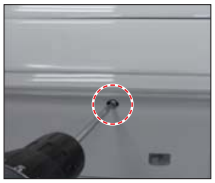


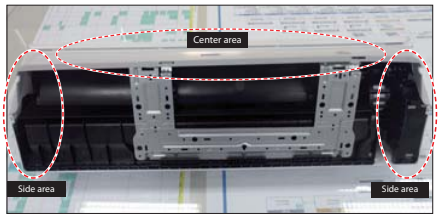
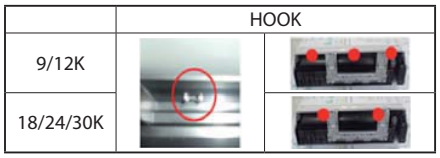
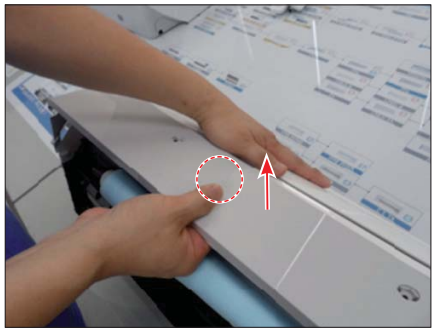
4. Disassembly and Reassembly

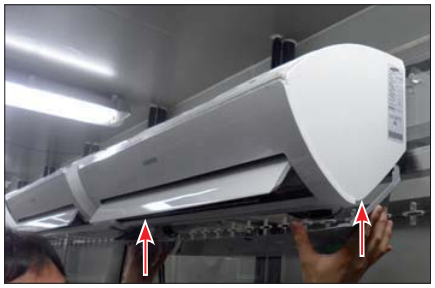
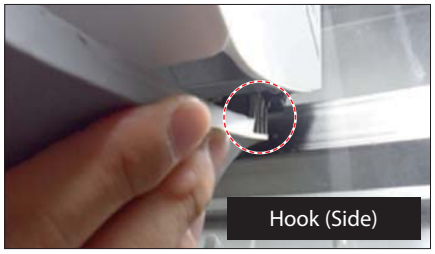
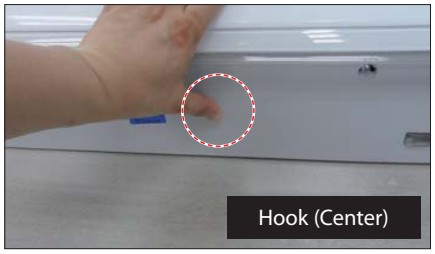
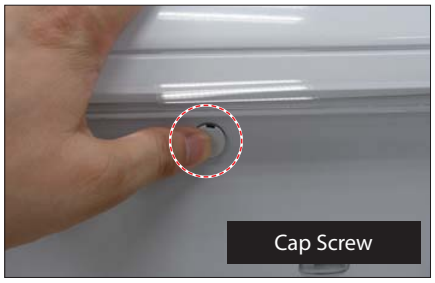
■ Necessary Tools

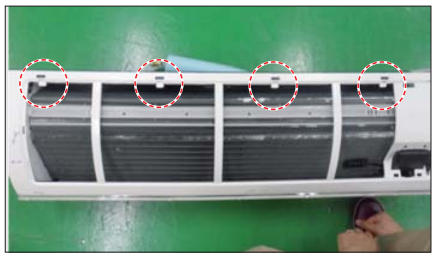
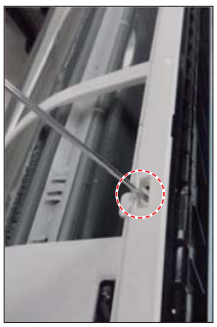
Item	Remark
+SCREW DRIVER	
MONKEY SPANNER	
- SCREW DRIVER	

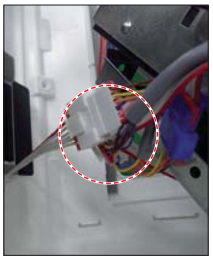
4-1. Indoor Unit

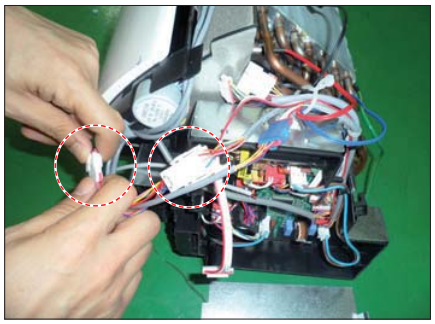
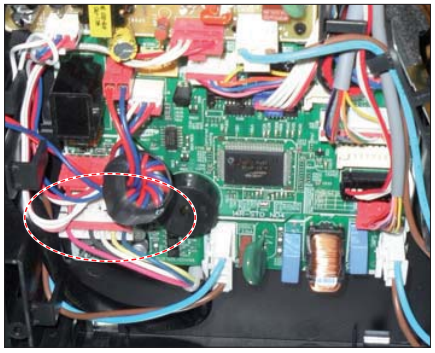
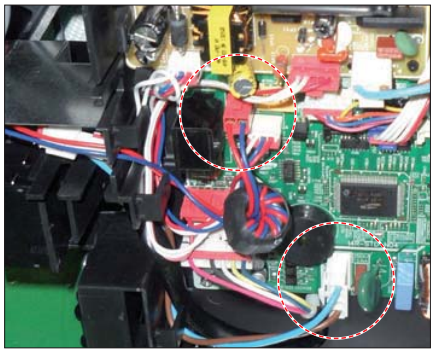
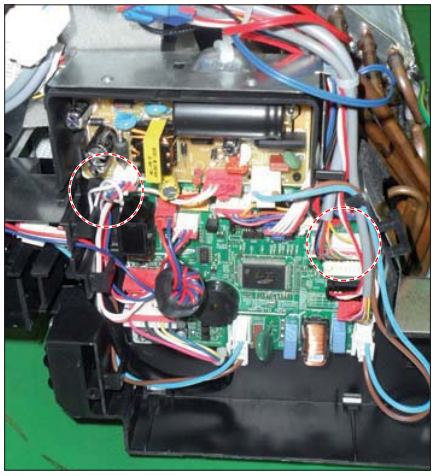
No	Parts	Procedure	Remark
1	PANEL-FRONT	1) Stop the driving of air conditioner and shut off main power supply.	
		2) Detach FILTER PRE from the PANEL FRONT.	
		3) Cover Panel is assembled on bottom of indoor unit as shown in the figure. Remove the Cap Screw as shown on the right side and then remove the screw and separate the Cover Panel.	  

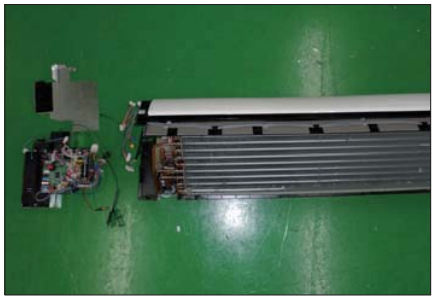
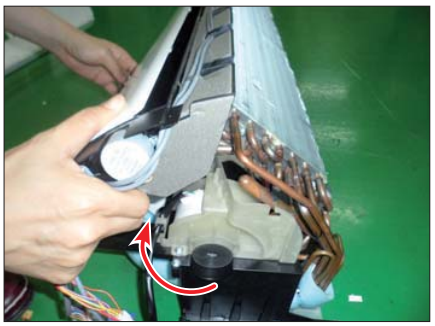
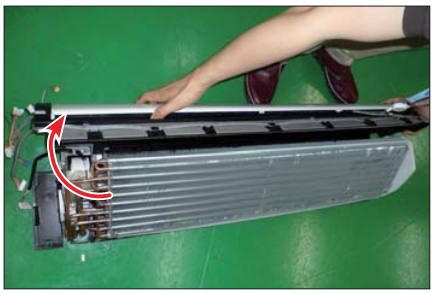
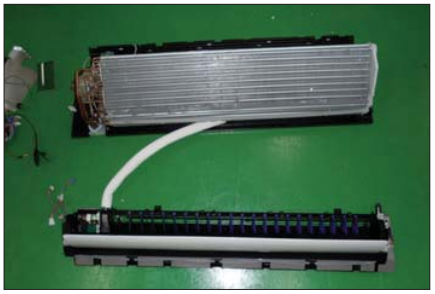
No	Parts	Procedure	Remark
		4) Cover Panel is fixed to body by Hook in center area and side area.	
			
		5) Separate the hook after pushing both end of Cover Panel as shown in the figure. (Watch out for the damage of the hook)	
		6) Raise front part upward obliquely as shown in the figure and then remove the hooks.	

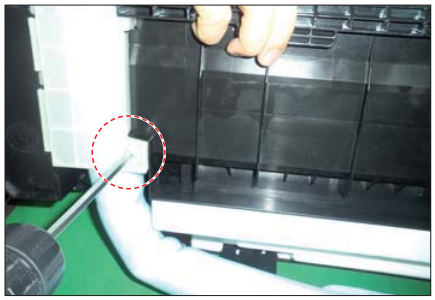
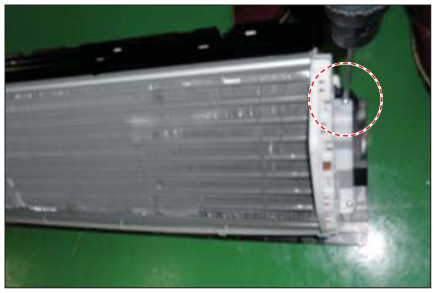
No	Parts	Procedure	Remark
		Caution: Assembly of Cover Panel after service end. - Reassembly is in the reverse order of the removal. - Piping and drain hose must be careful not to damage and Progress must be done with both hands.	  Hook (Side)  Hook (Center) Screw  Cap Screw

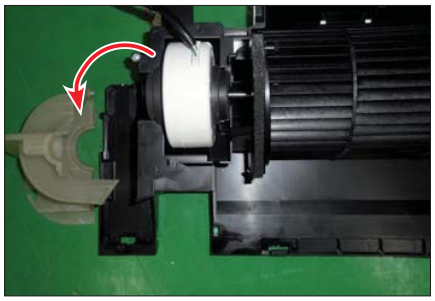
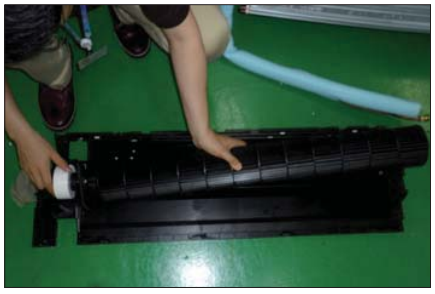
No	Parts	Procedure	Remark
		7) To detach the PANEL-FRONT from the main frame, unfasten 2 screws at the bottom. (use + Screw Driver)	
		8) To detach the COVER-PANEL from the main frame, loosen 4 HOOK Structures. When separate the hook : Use the (-) screw Driver. (-)Screw Driver Insert the hook and then pull the hook as shown on the right side. (Watch out for the damage of the hook)	 

No	Parts	Procedure	Remark
		9) Remove the Panel Frame from the Main Frame as shown on the right side.	
		10) Remove the WIFI KIT connector. WIFI KIT connector is located of Panel Front. (For model with WIFI KIT)	

No	Parts	Procedure	Remark
2	CONTORL IN	5) Loosen Stepping MOTOR Wire / BLADE Wire.	
		6) Loosen MOTOR Wire. ⚠ Caution: When you separate the connector, pull pressing the locking button.	
		7) Loosen the terminal block wires. ⚠ Caution: When you separate the connector, pull pressing the locking button.	
		8) Loosen the Thermistor wire connector, Display wire connector. ⚠ Caution: When you separate the connector, pull pressing the locking button.	

No	Parts	Procedure	Remark
5	EVAPORATOR	9) Take off the CASE-CONTROL from the main frame after loosen the remaining connector. ⚠ Caution: When you separate the connector, pull pressing the locking button.	
3	TRAY DRAIN	1) To detach TRAY-DRAIN from the main frame, pull the bottom of the TRAY-DRAIN towards you.	  

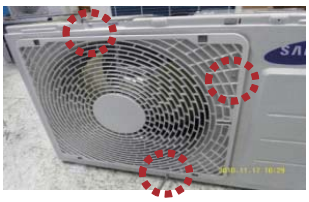
No	Parts	Procedure	Remark
4	Evaporator	1) Detach the HOLDER PIPE.	
		2) Unfasten the screw at the left side. (use + Screw Driver)	
		3) Unfasten the screw at the right side. (use + Screw Driver)	
		4) To detach Evaporator from the main frame, pull the bottom of the Evaporator towards you.	

No	Parts	Procedure	Remark
5	FAN MOTOR & CROSS FAN	1) Unfasten the screw. (use + Screw Driver)	
		2) Detach the FAN Motor case.	
		3) Unfasten the screw a little. (use + Screw Driver)	
		4) Pull the CROSS-FAN to the left side.	

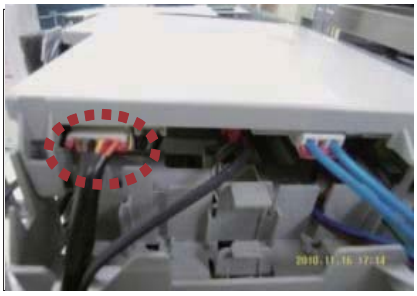
No	Parts	Procedure	Remark
6	Assy SPI Lamp	1) Remove the Assy SPI Lamp from the Back Body as shown on the right side. **Caution** - Confirm Seal of backside necessarily after replace of Assy SPI Lamp. - Seal should be close adhesion to SPI Lamp. - Measure as shown on the right side since replace. (If the seal is not close adhesion perfectly : Defectiveness can happen)	

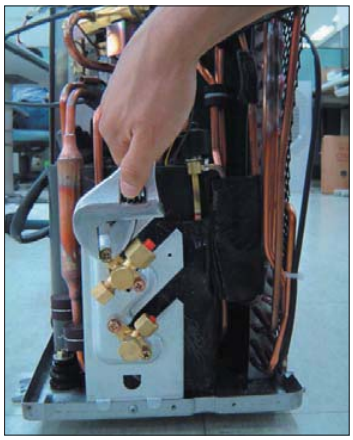
4 2 Outdoor Unit

No	Parts	Procedure	Remark
1	Common Work	1) Loosen 1 fixing screw(CCW) of the Cover-Side. (Use +Screw Driver.)	
		2) Loosen each 5 screws(CCW) on both right and left Cabinet Side edges and a fixing screw on the Cabinet Front lower to detach the Cabinet Front. (Use +Screw Driver.)	
		3) Detach the Cabinet Upper li e the picture.	
		4) Loosen 2 screw(CCW) fixed to assemble Plate Control Out with Cabinet-Side RH. (Use +Screw Driver.)	

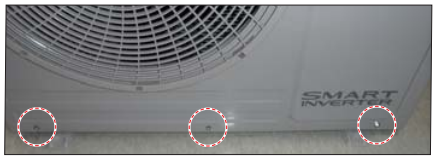
No	Parts	Procedure	Remark
1	Common Work	5) Loosen 2 screw(CCW) on the right side of Cabinet Front. (Use □Screw Driver)	
		6) Loosen 2 screw(CCW) on the left side of Cabinet Front. (Use □Screw Driver)	
		7) Loosen 3 screw(CCW) on the front side of Cabinet Front. (Use □Screw Driver)	

No	Parts	Procedure	Remark
		8) Loosen 3 fixing screws(CCW) on the rear side of Cabinet-Side RH. (Use +Screw Driver.)	
		9) Loosen 3 screws(CCW) fixed to assemble Bracket Valve with Cabinet-Side RH. (Use +Screw Driver.)	

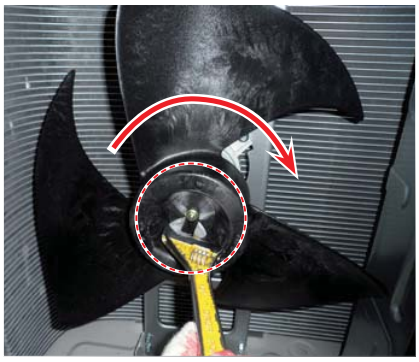
No	Parts	Procedure	Remark
2	Ass'y Control Out	1) Detach the Motor Wire from the PCB of Ass'y Control Out.	
		2) Detach several connectors from the PCB of Ass'y Control Out.	
		3) Detach 2 Connect Wires from Reactor.	
		4) Loosen 1 screw(CCW) fixed to assemble Ass'y Control Out with Partition. (Use +Screw Driver.)	

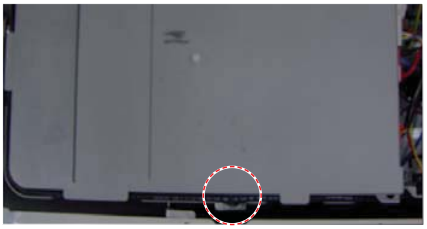
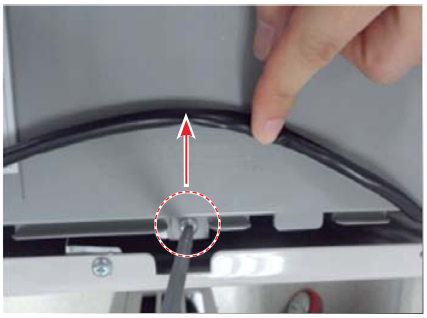
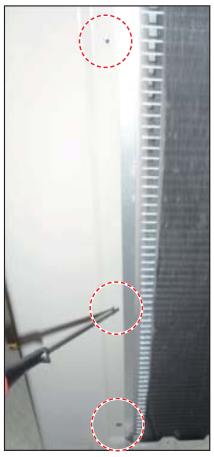
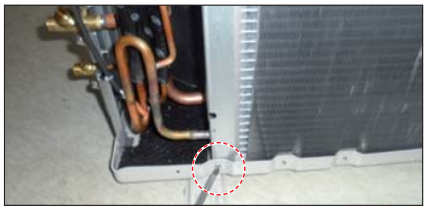
No	Parts	Procedure	Remark
3	Fan & Motor	1) Release Nut at Fan Boss 2) Release 3 screws st Motor Bracket. 3) Detach Motor Wire from the Assy Control Out.	
4	Heat Exchanger	1) Loosen 1 fixing screws(CCW) on both sides. (Use +Screw Driver.) 2) Disassemble the pipes in both inlet and outlet with welding torch. 3) Detach the Heat Exchanger. ⚠ Before you disassemble the pipes and Condenser, be sure that there should be no refrigerant remained in the unit.	
5	Ass'y Valve 4-Way & Ass'y Valve EEV	1) Loosen 4 bolts(CCW) fixed to assemble Valve Service with Bracket Valve like the picture on the right side. (Use Monkey Spanner.) 2) Disassemble the pipes assembled the suction and discharge sides of the Compressor with welding torch.	
6	Compressor	1) Loosen the Nut(CCW) of Terminal Cover. (Use Monkey Spanner.) 2) Detach the Terminal Cover and detach the Connect Comp Wire from Compressor. 3) Disassemble the Felt Comp Sound. 4) Loosen the 3 bolts(CCW) at the bottom of Compressor like the picture on the right side. (Use Monkey Spanner.)	

Outdoor Unit(18K)

No	Parts	Procedure	Remark
1	Common Work	1) Loosen each screws and detach the Cabi Top Cover.	
		2) Loosen screws of the Cabi Front and detach it.	
			

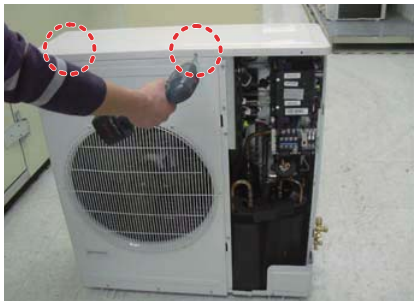
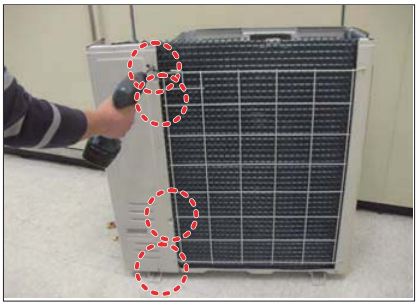
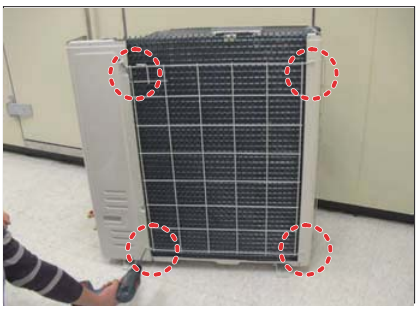
No	Parts	Procedure	Remark
		3) Loosen the 4 screws and detach the condbar.	
		4) Loosen fixing screws from the Cabi Front Lh and detach it.	
		5) Loosen fixing screws from the Cabi Side Rh and detach it.	

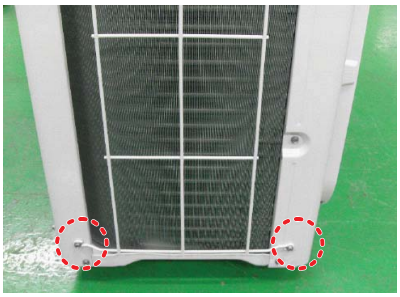
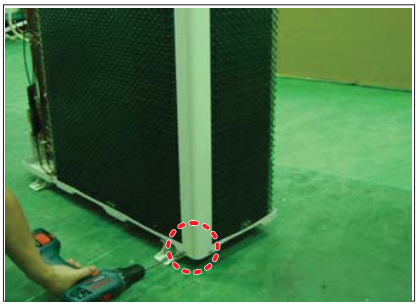
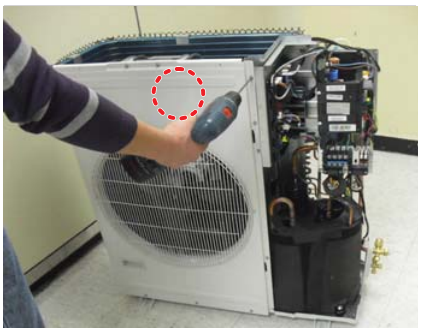
No	Parts	Procedure	Remark
2	Fan & Motor	1) Detach the Nut Flange like the picture on the right side.(Turn clockwise because the screw is left-handed.) (Use Monkey Spanner.)	
		2) Detach the Fan Propeller. 3) Loosen 4 fixing screws to detach the Motor. (Use Monkey Spanner.)	
		4) Disconnect the wire between Ass'y Control Out and Motor.	
		5) Loosen 2 fixing bolts and detach the Bracket Motor.(Use Monkey Spanner	

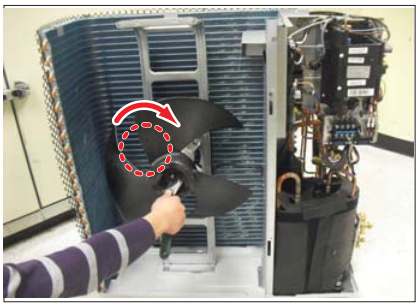
No	Parts	Procedure	Remark
3	Ass'y Control Out	1) To remove the Cover control box : Pull the motor wire is allow sufficient space as shown on the right side and then remove the screw. 2) Detach several connectors from the Ass'y Control Out. 3) Detach several connectors from the PCB of Ass'y Control Out.	 
4	Heat Exchanger	1) Release the refrigerant at first. 2) Loosen fixing screw on both sides. 3) Disassemble the pipes in both inlet and outlet with welding torch. 4) Detach the Heat Exchanger.	 

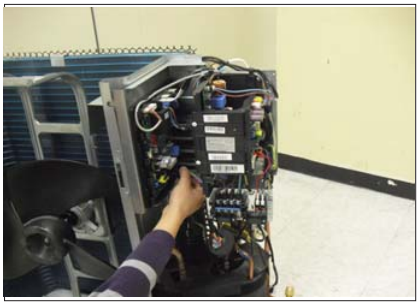
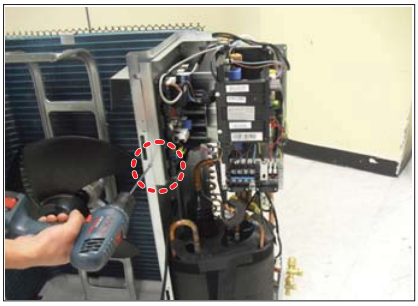
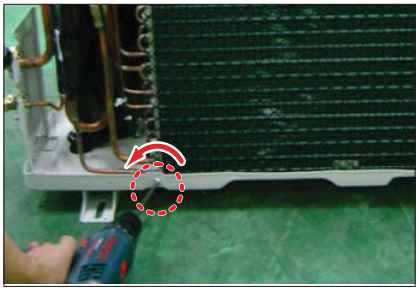
No	Parts	Procedure	Remark
5	Compressor	1) Loosen the fixing nut and detach the Compressor Lead Wire. (Use Monkey Spanner.)	
		2) Loosen the bolts at the bottom of Compressor like the picture on the right side. (Use Monkey Spanner.)	

■ AR24HSFSHWKXCV

No	Parts	Procedure	Remark
1	Common Work	1) Loosen 2 fixing screws of the Cabi Front Rh and detach the Cabi Front Rh.	
		2) Loosen each 8 fixing screws and detach the Cabi Top Cover.	
		3) Loosen 17 fixing screws from the Cabi Front Rh.	
			
		4) Loosen 4 fixing screws from cond-bar.	

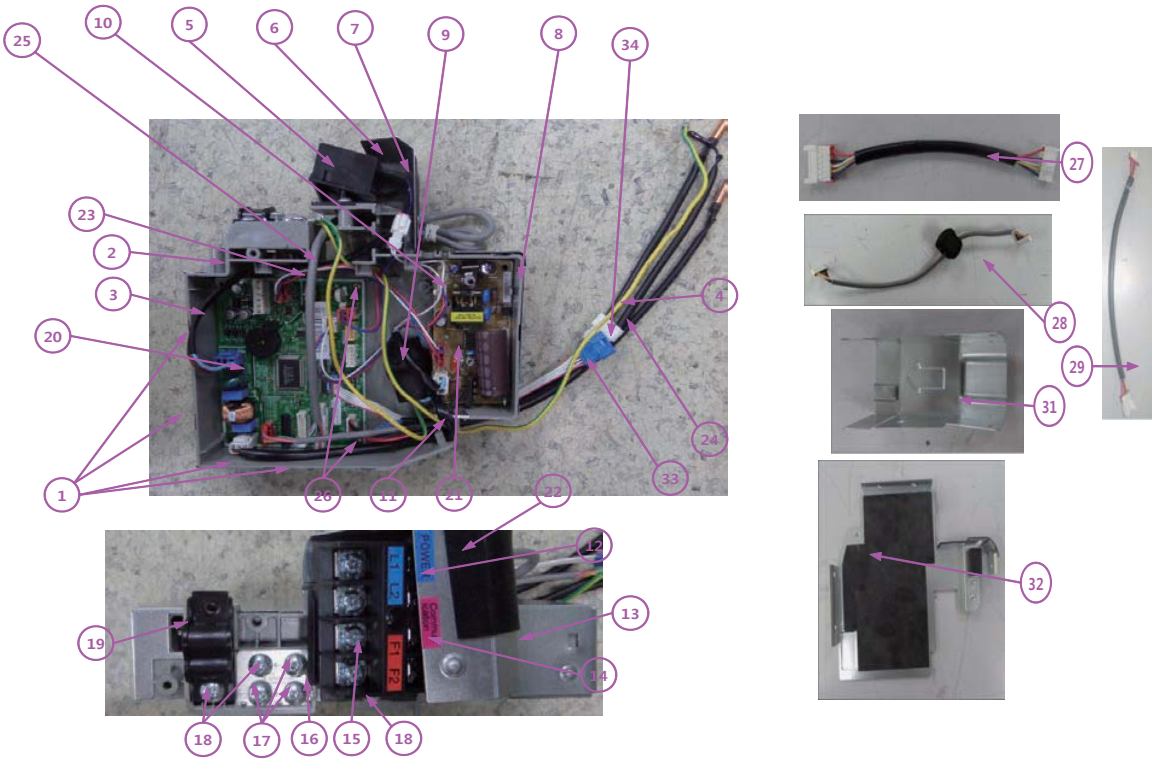
No	Parts	Procedure	Remark
		5) Loosen the 4 screws and detach the cond-bar(Right).	
		6) Loosen the fixing screws and detach the Cabi Back Lf.	
		7) Loosen 13 fixing screws of the Cabi Front Lf and detach it.	

No	Parts	Procedure	Remark
2	Fan & Motor	1) Detach the Nut Flange like the picture on the right side.(Turn clockwise because the screw is left-handed.) (Use Monkey Spanner.)	
		2) Detach the Fan Propeller. 3) Loosen 4 fixing screws to detach the Motor.(Use Monkey Spanner.)	
		4) Disconnect the wire between Ass'y Control Out and Motor.	
		5) Loosen 2 fixing bolts and detach the Bracket Motor.(Use Monkey Spanner.)	

No	Parts	Procedure	Remark
3	Ass'y Control Out	1) Detach several connectors from the Ass'y Control Out. 2) Detach several connectors from the PCB of Ass'y Control Out. 3) Pull up the Ass'y Control Out.	 
4	Heat Exchanger	1) Release the refrigerant at first. 2) Loosen fixing screw on both sides. 3) Disassemble the pipes in both inlet and outlet with welding torch. 4) Detach the Heat Exchanger.	 

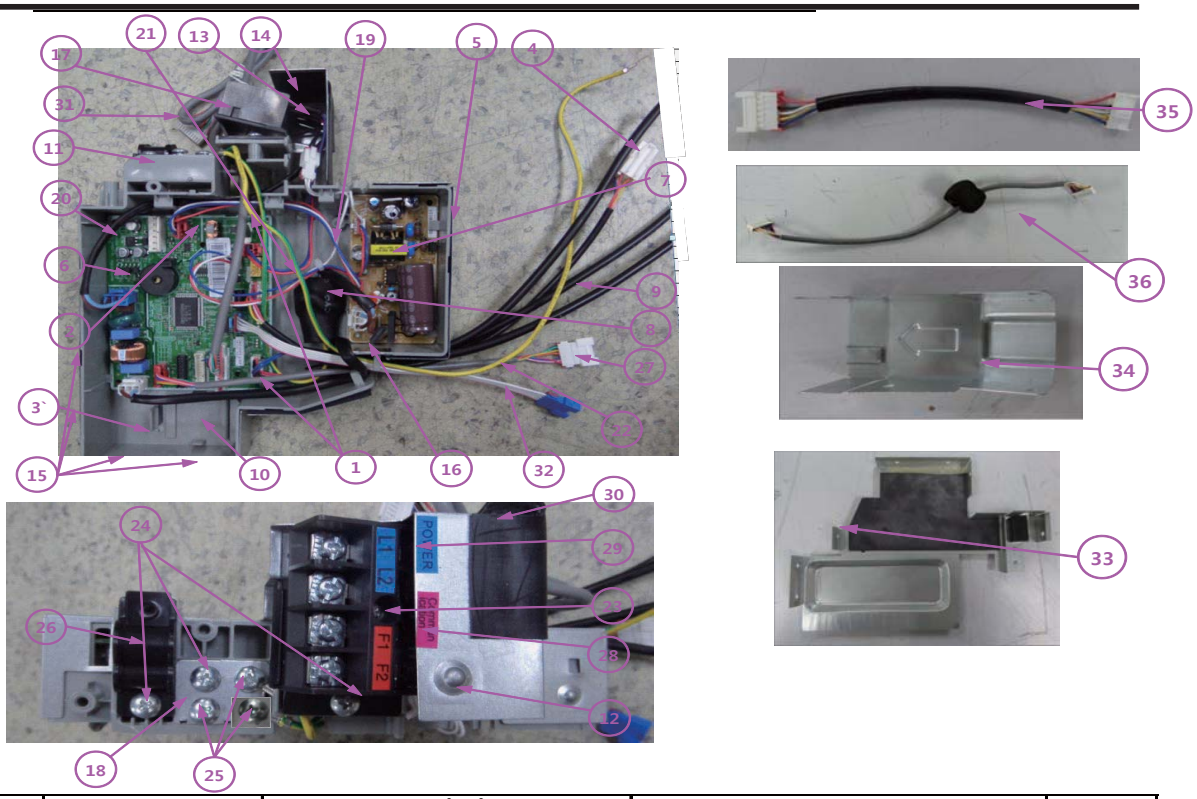
No	Parts	Procedure	Remark
5	Compressor	1)Loosen the fixing nut and detach the Compressor Lead Wire. (Use Monkey Spanner.)	
		3) Loosen the 3 bolts at the bottom of Compressor like the picture on the right side.(Use Monkey Spanner.)	

5-2 ASSY CONTROL IN -9K/12K



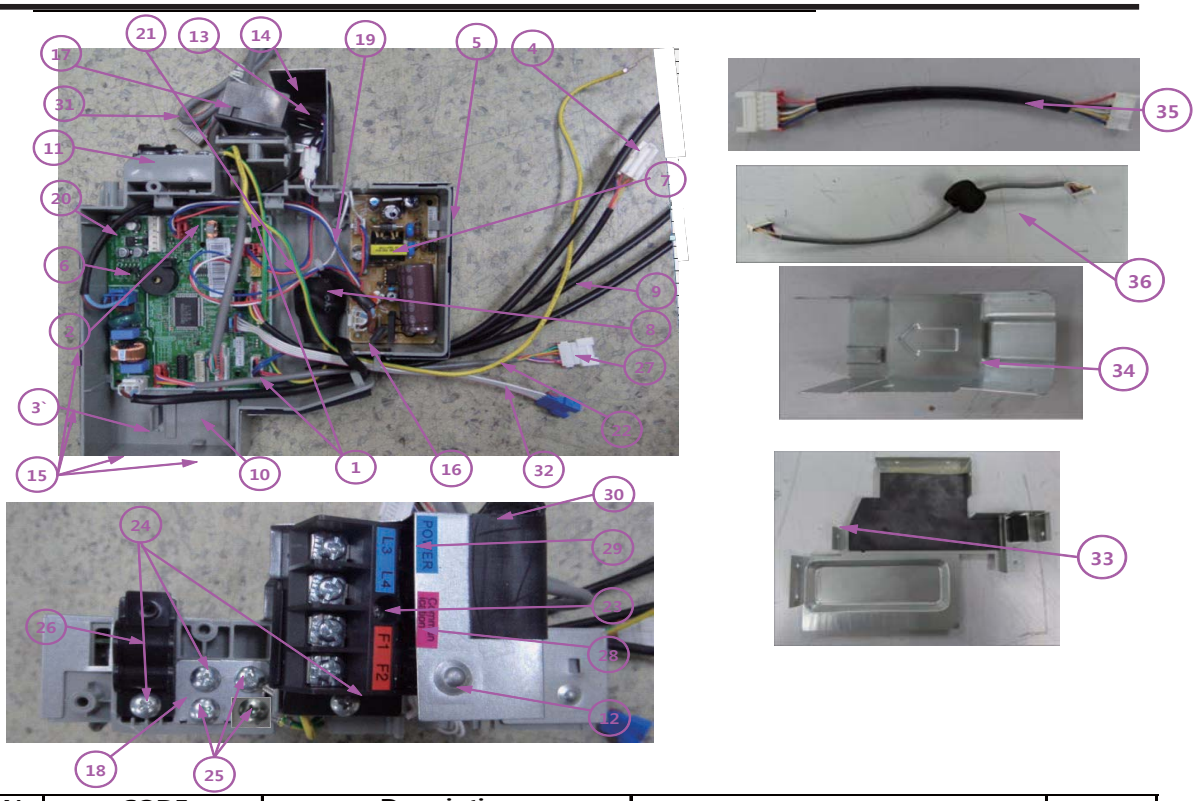
No	CODE	Description	Spec	Q'TY
	DB93-14734E	ASSY CONTROL IN		
1	DB63-03553C	Aluminum SHEET	10x10xT0.07, AL SHEET	4
2	DB61-05826B	CASE-CONTROL IN	CASE-CONTROL IN	1
3	DB93-14203A	POWER WIRE	T/B-main(power)	1
4	DB93-14245A	EARTH WIRE	EARTH WIRE	1
5	DB65-00326A	TERMINAL BLOCK	TERMINAL BLOCK	1
6	DB62-11656F	SEAL CUTT	PVC, BLACK, T1, W54	1
7	DB62-11680A	SEAL CONTROL	FLOCKED, BLACK, T1, W50, 54	1
8	DB68-02809A	ASSY-LABEL	ASSY-LABEL	1
9	DB93-06677A	COMMUNICATION WIRE	T/B-main(485)	1
10	DB93-14207A	FUSE WIRE	power-main(12V 5V)	1
11	DB63-03553D	Aluminum SHEET	22x22xT0.07, AL SHEET	1
12	DB68-33293A	ASSY-LABEL	ASSY-LABEL	1
13	DB61-05957A	PLATE-CONTROL IN	F03/04	1
14	DB68-33292A	ASSY-LABEL	ASSY-LABEL	1
15	DB91-00309A	SCREW	M3, L25, ZPC(WHT), SWRCH18A	1
16	DB61-05812A	PLATE	PLATE	1
17	6009-001001	SCREW	TH, M4, L10, ZPC(WHT), SWRCH18A	3
18	6002-000231	SCREW	M4, L12, ZPC(WHT), SWRCH18A	3
19	DB61-05871A	HOLDER-WIRE CLAMP	HOLDER-WIRE CLAMP	1
20	DB92-02873C	MAIN PBA	STD4	1
21	DB92-02861A	POWER PBA	STD11W	1
22	DB62-11793A	SEAL CASE-LEFT	SEAL CASE-LEFT	1
23	DB93-14208A	ASSY CONNECTOR WIRE-DC	power-main(310V 19V)	1
24	DB95-05163A	ASSY THERMISTOR IN	sensor 1room, 2evap	1
25	DB93-14221A	ASSY CONNECTOR WIRE-DC	FJM	1
26	6002-000630	SCREW	SCREW	2
27	DB93-14724A	ASSY CONNECTOR WIRE-DC	BLDC	1
28	DB93-14209A	ASSY CONNECTOR WIRE-DC	DISPLAY MOTOR	0
28	DB93-14209B	ASSY CONNECTOR WIRE-DC	DISPLAY MOTOR	1
29	DB93-14723A	ASSY CONNECTOR WIRE-DC	STEP MOTOR	1
30	DB93-04695A	ASSY CONNECTOR WIRE-DC	SPI	0
31	DB61-05965A	PLATE CONTROL-UP	PLATE CONTROL-UP	1
32	DB90-07859A	ASSY PLATE CONTROL	RIGHT	1
33	DB93-14205A	ASSY CONNECTOR WIRE-DC	Step-main(Left)	0
34	DB93-14211A	ASSY CONNECTOR WIRE-DC	WIFI	1

5-2 ASSY CONTROL IN-18K



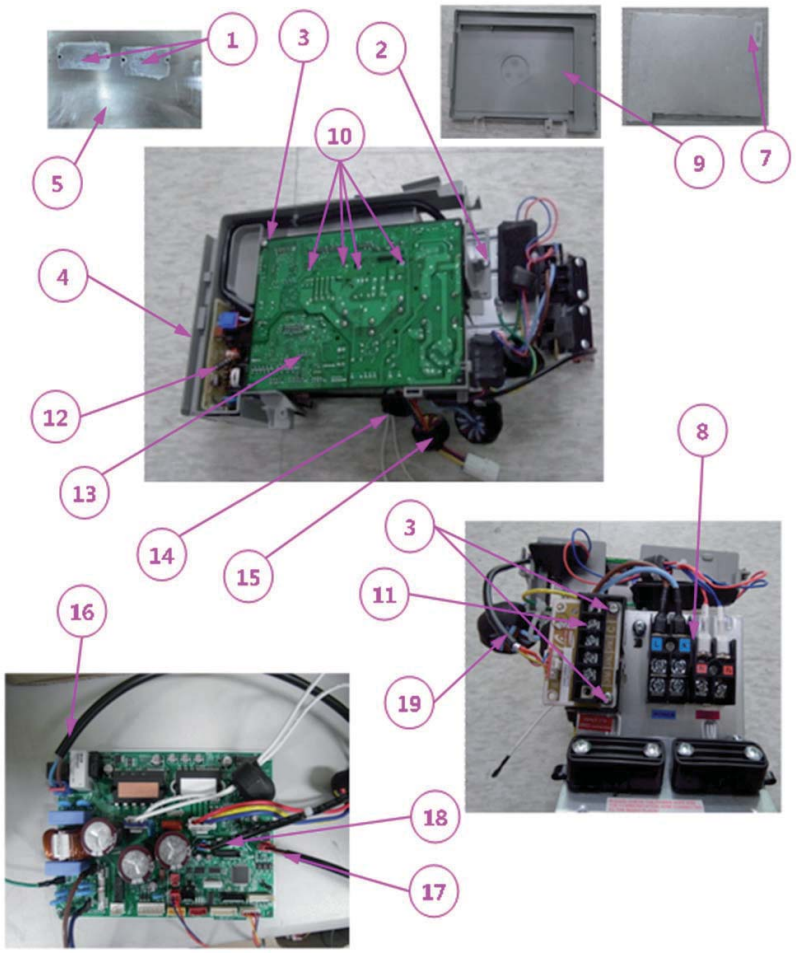
No	CODE	Description	Spec	Q'TY
	DB93-14738F	**ASSY CONTROL IN**		**1**
1	6002-000630	ASSY-SCREW TAPPING	PBA-TAPPING	2
2	DB93-14208A	ASSY CONNECTOR WIRE-DC	power-main(310V 19V)	1
3	DB61-05891B	ASSY CASE CONTROL IN	F-05	1
4	DB93-14218A	ASSY CONNECTOR WIRE-DC	Step-main(up)	1
5	DB68-02809A	LABEL BAR CODE	LABEL BAR CODE	1
6	DB92-02873A	ASSY PCB MAIN IN	STD4	1
7	DB92-02861A	ASSY MODULE	11W	1
8	DB93-06677A	ASSY CONNECTOR WIRE-POWER	main-power(SMPS IN)	1
9	DB95-05163A	ASSY THERMISTOR IN	sensor 1room, 2evap	1
10	DB61-05891A	CASE CONTROL IN	F-05	**1**
11	DB61-05963A	SUPPORT-CONTROL	case sub	**1**
12	DB61-05961A	PLATE CONTROL-LEFT	PLATE CONTROL-LEFT	**1**
13	DB62-11670A	SEAL CONTROL-A	FLOCKED 52*65*T1 BLACK	**1**
14	DB62-11656C	SEAL CUTT	PVC 52*30*T1 BLACK	**0.052m**
15	DB63-03553C	SHEET-CONTROL	10x10xT0.07,AL SHEET	**4**
16	DB63-03553D	SHEET-CONTROL	22x22xT0.07,AL SHEET	**1**
17	DB65-00326A	TERMINAL BLOCK	TERMINAL BLOCK	**1**
18	DB61-05812A	PLATE CONTROL-SUB	PLATE CONTROL-SUB	**1**
19	DB93-14207A	ASSY CONNECTOR WIRE-DC SIGNAL	power-main(12V 5V)	**1**
20	DB93-14203A	ASSY CONNECTOR WIRE-POWER	T/B-main(power)	**1**
21	DB93-14238A	ASSY CONNECTOR WIRE-COMM	T/B-main(485)	**1**
22	DB93-14245A	ASSY CONNECTOR WIRE-EARTH	ASSY CONNECTOR WIRE-EARTH	**1**
23	DB91-00309A	ASSY-SCREW TAPPING	M3,L25,ZPC(WHT),SWRCH18A	**1**
24	6002-000231	SCREW-TAPPING	M4,L12,ZPC(WHT),SWRCH18A	**3**
25	6009-001001	SCREW-SPECIAL	TH,M4,L10,ZPC(WHT),SWRCH18A	**3**
26	DB61-05871A	HOLDER-WIRE	HOLDER-WIRE	**1**
27	DB93-14211A	ASSY CONNECTOR WIRE	FJM	**1**
28	DB98-33292A	ASSY-LABEL CAUTION	ASSY-LABEL CAUTION	**1**
29	DB98-33293A	ASSY-LABEL CAUTION	ASSY-LABEL CAUTION	**1**
30	DB62-11795A	SEAL CASE-LEFT	SEAL CASE-LEFT	1
31	DB93-14221A	ASSY CONNECTOR WIRE	FJM	1
32	DB93-14205A	ASSY CONNECTOR WIRE	LEFT-RIGHT	**0**
33	DB90-07796A	ASSY PLATE CONTROL	ASSY PLATE CONTROL	**1**
34	DB61-05965A	PLATE CONTROL-UP	PLATE CONTROL-UP	1
35	DB93-14724A	ASSY CONNECTOR WIRE-DC	BLDC MOTOR WIRE	1
36	DB93-14209B	ASSY CONNECTOR WIRE-DISPLAY	DISPLAY WIRE	1

5-2 ASSY CONTROL IN-24K



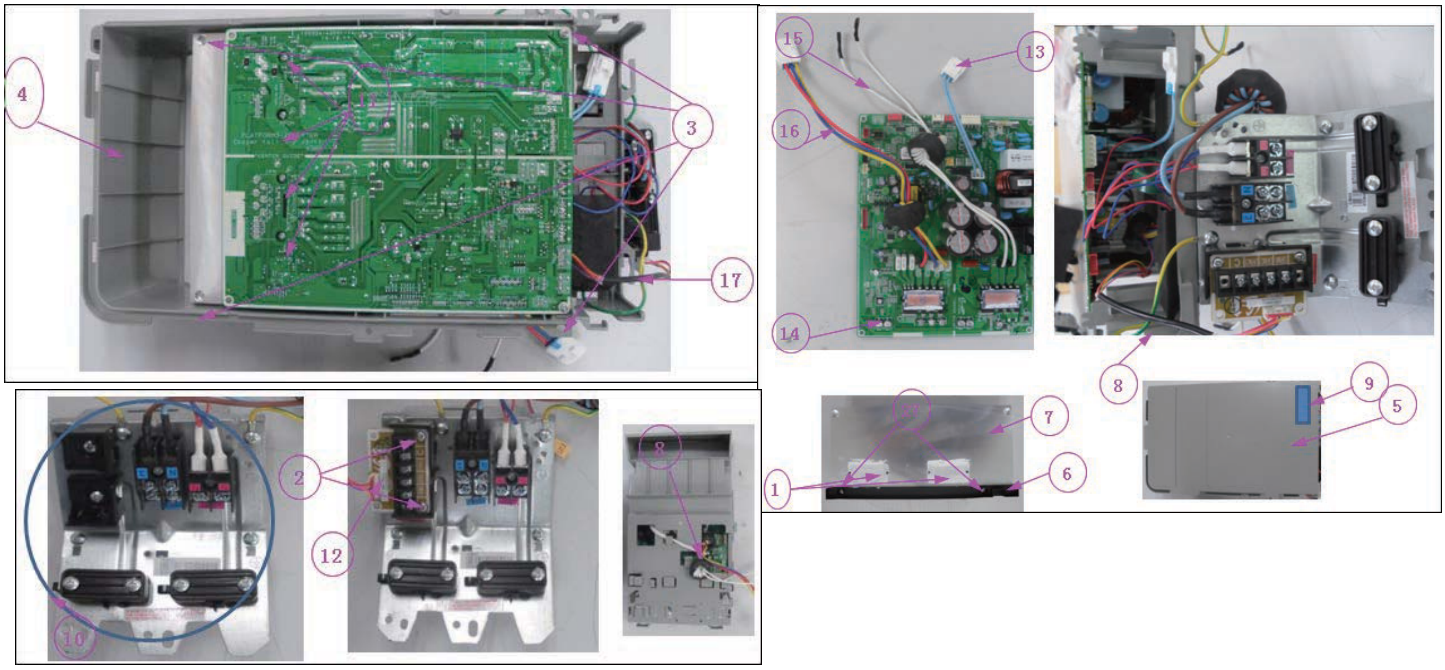
No	CODE	Description	Spec	Q'TY
	DB93-14738F	**ASSY CONTROL IN**		**1**
1	6002-000630	ASSY-SCREW TAPPING	PBA-TAPPING	2
2	DB93-14208A	ASSY CONNECTOR WIRE-DC	power-main(310V 19V)	1
3	DB61-05891B	ASSY CASE CONTROL IN	F-05	1
4	DB93-14218A	ASSY CONNECTOR WIRE-DC	Step-main(up)	1
5	DB68-02809A	LABEL BAR CODE	LABEL BAR CODE	1
6	DB92-02873A	ASSY PCB MAIN IN	STD4	1
7	DB92-02861A	ASSY MODULE	11W	1
8	DB93-06677A	ASSY CONNECTOR WIRE-POWER	main-power(SMPS IN)	1
9	DB95-05163A	ASSY THERMISTOR IN	sensor 1room, 2evap	1
10	DB61-05891A	CASE CONTROL IN	F-05	**1**
11	DB61-05963A	SUPPORT-CONTROL	case sub	**1**
12	DB61-05961A	PLATE CONTROL-LEFT	PLATE CONTROL-LEFT	**1**
13	DB62-11670A	SEAL CONTROL-A	FLOCKED 52*65*T1 BLACK	**1**
14	DB62-11656C	SEAL CUTT	PVC 52*30*T1 BLACK	**0.052m**
15	DB63-03553C	SHEET-CONTROL	10x10xT0.07,AL SHEET	**4**
16	DB63-03553D	SHEET-CONTROL	22x22xT0.07,AL SHEET	**1**
17	DB65-00326A	TERMINAL BLOCK	TERMINAL BLOCK	**1**
18	DB61-05812A	PLATE CONTROL-SUB	PLATE CONTROL-SUB	**1**
19	DB93-14207A	ASSY CONNECTOR WIRE-DC SIGNAL	power-main(12V 5V)	**1**
20	DB93-14203A	ASSY CONNECTOR WIRE-POWER	T/B-main(power)	**1**
21	DB93-14238A	ASSY CONNECTOR WIRE-COMM	T/B-main(485)	**1**
22	DB93-14245A	ASSY CONNECTOR WIRE-EARTH	ASSY CONNECTOR WIRE-EARTH	**1**
23	DB91-00309A	ASSY-SCREW TAPPING	M3,L25,ZPC(WHT),SWRCH18A	**1**
24	6002-000231	SCREW-TAPPING	M4,L12,ZPC(WHT),SWRCH18A	**3**
25	6009-001001	SCREW-SPECIAL	TH,M4,L10,ZPC(WHT),SWRCH18A	**3**
26	DB61-05871A	HOLDER-WIRE	HOLDER-WIRE	**1**
27	DB93-14211A	ASSY CONNECTOR WIRE	FJM	**1**
28	DB98-33292A	ASSY-LABEL CAUTION	ASSY-LABEL CAUTION	**1**
29	DB98-33293A	ASSY-LABEL CAUTION	ASSY-LABEL CAUTION	**1**
30	DB62-11795A	SEAL CASE-LEFT	SEAL CASE-LEFT	1
31	DB93-14221A	ASSY CONNECTOR WIRE	FJM	1
32	DB93-14205A	ASSY CONNECTOR WIRE	LEFT-RIGHT	**0**
33	DB90-07796A	ASSY PLATE CONTROL	ASSY PLATE CONTROL	**1**
34	DB61-05965A	PLATE CONTROL-UP	PLATE CONTROL-UP	1
35	DB93-14724A	ASSY CONNECTOR WIRE-DC	BLDC MOTOR WIRE	1
36	DB93-14209B	ASSY CONNECTOR WIRE-DISPLAY	DISPLAY WIRE	1

5-3 Assy Control Out (9K/12K)



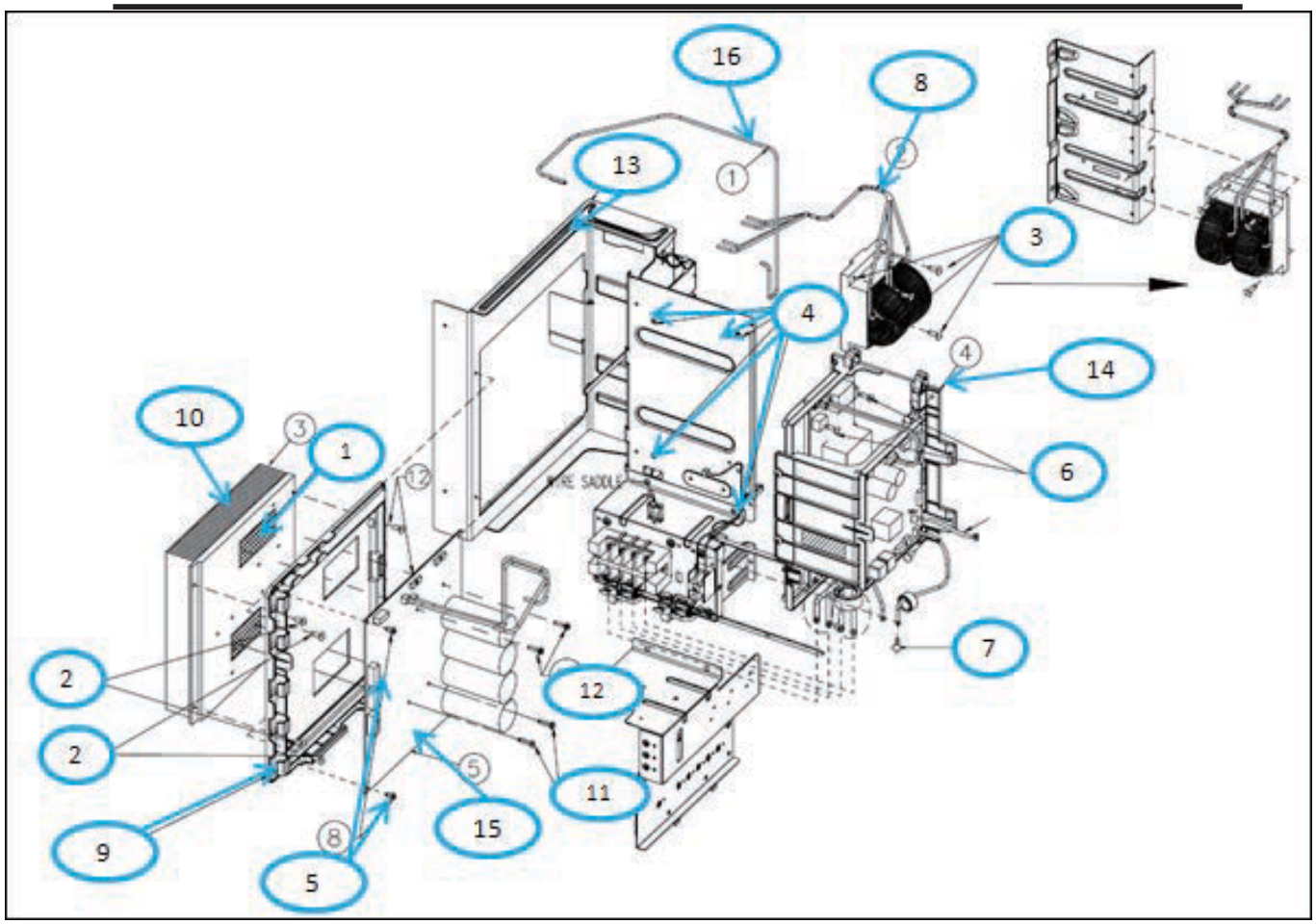
No	NAME	CODE	QTY	No	NAME	CODE	QTY
1	GREASE-SILICON	0205-000178	0.002	8-12	ASSY CONNECTOR WIRE-COMM	DB93-14285A	1
2	SCREW-TAPPING	6002-000527	1	8-13	ASSY-SCREW TAPPING	DB97-02418A	4
3	SCREW-TAPPING	6002-000536	3	8-14	ASSY-LABEL CAUTION	DB98-33292A	1
4	CASE CONTROL	DB61-05883A	1	8-15	ASSY-LABEL CAUTION	DB98-33293A	1
5	HEAT SINK	DB62-11646A	1	8-16	ASSY-LABEL CAUTION	DB98-34030A	1
6	CABLE TIE	DB65-10088D	3	9	ASSY COVER CONTROL-UP	DB90-07729A	1
7	LABEL BAR CODE	DB68-02809A	1	9-1	PLATE CONTROL-UP	DB61-05821A	1
8	ASSY CASE CONTROL OUT	DB90-06308L	1	9-2	COVER CONTROL-OUT	DB63-03506A	1
8-1	SCREW-TAPPING	6002-000527	4	10	ASSY-SCREW MACHINE	DB91-00933A	4
8-2	SCREW-TAPPING	6002-000555	2	11	ASSY PCB SUB	DB92-02836A	1
8-3	SCREW-SPECIAL	6009-001001	4	12	ASSY MODULE	DB92-02862A	1
8-4	HOLDER-WIRE CLAMP	DB61-00250A	2	13	ASSY PCB MAIN	DB92-02866A	1
8-5	SUPPORT-PCB	DB61-04398A	2	14	ASSY CONNECTOR WIRE	DB93-09493C	1
8-6	PLATE CONTROL	DB61-05897A	1	15	ASSY CONNECTOR WIRE	DB93-09497E	1
8-7	TERMINAL BLOCK	DB65-00274A	1	16	ASSY CONNECTOR WIRE-POWER	DB93-14275A	1
8-8	TERMINAL BLOCK	DB65-00298B	1	17	ASSY CONNECTOR WIRE-DC SIGNAL	DB93-14276A	1
8-9	LABEL CAUTION	DB68-03146A	1	18	ASSY CONNECTOR WIRE-DC SIGNAL	DB93-14277A	1
8-10	ASSY CONNECTOR WIRE	DB93-09495	1	19	ASSY CONNECTOR WIRE-DC SIGNAL	DB93-14278A	1
8-11	ASSY CONNECTOR WIRE-EARTH WIRE	DB93-12121A	1				

Assy Control Out (18K)



No	NAME	CODE	Q'ty			unit	REMARK
0	ASSY CONTROL OUT	DB93-10961	S	T	U		
1	GREASE-SILICON	0205-000178	0.003	0.003	0.003	EA	
2	SCREW-TAPPING	6002-000536	2	0	0	EA	
3	SCREW-TAPPING	6002-000630	4	4	4	EA	
4	CASE CONTROL-OUT	DB61-04908A	1	1	1	EA	
5	CASE CONTROL-UPPER	DB61-04910A	1	1	1	EA	
6	SUPPORT-HEAT SINK	DB61-05790A	1	1	1	EA	
7	HEAT SINK	DB62-10653A	1	1	1	EA	
8	CABLE TIE	DB65-10088B	0	1	1	EA	
	CABLE TIE	DB65-10088C	1	0	0	EA	
9	LABEL BAR CODE	DB68-02809A	1	1	1	EA	
10	ASSY CASE CONTROL OUT	DB90-06309L	1	0	0	EA	
	ASSY CASE CONTROL OUT	DB90-06309N	0	1	0	EA	
	ASSY CASE CONTROL OUT	DB90-06309P	0	0	1	EA	
11	ASSY-SCREW MACHINE	DB91-00933A	6	6	6	EA	
12	ASSY PCB SUB	DB92-02836A	1	0	0	EA	
13	ASSY CONNECTOR WIRE-4WAY C	DB93-10821C	1	1	1	EA	
14	ASSY PCB MAIN	DB93-10939K	1	1	1	EA	
15	ASSY CONNECTOR WIRE	DB93-10987A	1	1	1	EA	
16	ASSY CONNECTOR WIRE	DB93-10988E	1	1	1	EA	
17	ASSY CONNECTOR WIRE	DB93-14069A	1	0	0	EA	

Assy Control Out (24K)



No	NAME	CODE	Q'ty			unit	REMARK
	ASSY CONTROL OUT	DB93-09771	G	H			
1	GREASE-SILICON	0205-000178	0.007	0.007		KG	
2	SCREW-MACHINE	6001-001054	6	6		PC	
3	SCREW-TAPPING	6002-000216	4	4		PC	
4	SCREW-TAPPING	6002-000231	4	4		PC	
5	SCREW-TAPPING	6002-000536	2	2		PC	
6	SCREW-TAPTYPE	6003-001150	2	2		PC	
7	SCREW-SPECIAL	6009-001001	1	1		PC	
8	AC REACTOR	DB59-00016A	1	1		PC	
9	CASE-INVERTER 1PHASE	DB61-05286A	1	1		PC	
10	HEAT SINK	DB62-10902A	1	1		PC	
11	ASSY-SCREW MACHINE	DB91-00306A	2	2		PC	
12	ASSY-SCREW MACHINE	DB91-00307A	2	2		PC	
13	ASSY CONTROL OUT	DB93-09793D	0	1		PC	
		DB93-09793G	1	0		PC	
14	ASSY CONTROL OUT	DB93-09902F	1	1		PC	
15	ASSY PCB MAIN-INVERTER	DB93-11112D	1	0		PC	
		DB93-11112E	0	1		PC	
16	ASSY CONNECTOR WIRE-COMM(MA	DB93-13119A	1	1		PC	

6. Electrical Parts List

6-1 INDOOR MAIN PCB (DB92-02873C)

Parts Code	Design Loc	Parts Description	Quantity
0201-002081	-	ADHESIVE-SIL	0.8
0202-001463	SOLDER WIRE	SOLDER-WIRE	1.8
0202-001608	SOLDER-WIRE FLUX	SOLDER-WIRE FLUX	0.2
0204-004665	FLUX	FLUX	2
0502-000245	Q701	TR-POWER	1
1405-001239	VA71	VARISTOR	1
2301-002032	XC71	C-FILM,LEAD-PPF	1
2301-002032	XC72	C-FILM,LEAD-PPF	1
3002-001139	BZ61	BUZZER-PIEZO	1
3711-000024	CN76	HEADER-BOARD TO CABLE	1
3711-000177	CN21	HEADER-BOARD TO CABLE	1
3711-000203	CN75	HEADER-BOARD TO CABLE	1
3711-000296	CN72	HEADER-BOARD TO CABLE	1
3711-000941	CN81	HEADER-BOARD TO CABLE	1
3711-000998	CN77	CONNECTOR-HEADER	1
3711-000999	CN61	HEADER-BOARD TO CABLE	1
3711-002001	CN31	HEADER-BOARD TO CABLE	1
3711-003404	CN71	HEADER-BOARD TO CABLE	1
3711-003845	CN91	HEADER-BOARD TO CABLE	1
3711-004122	CN32	HEADER-BOARD TO CABLE	1
3711-004236	CN43	HEADER-BOARD TO CABLE	1
3711-005096	CN63	HEADER-BOARD TO CABLE	1
3711-005097	CN62	HEADER-BOARD TO CABLE	1
3711-005504	CN51	HEADER-BOARD TO CABLE	1
DB27-00096A	FT71	COIL CHOKE	1
DB67-00942A	VA71-1	CAP	1
DB68-02809A	LABEL BAR CODE	LABEL BAR CODE	1
DB94-04840A	-	ASSY PCB AUTO	1
0501-000362	Q801	TR-SMALL SIGNAL	1
1404-001194	PTC2	THERMISTOR-PTC	1
3601-001765	F701	FUSE-ETC	1
DB94-04841A	-	ASSY PCB SMD	1
0202-001459	SOLDER CREAM	SOLDER-CREAM	1
0402-001741	D701	DIODE-RECTIFIER	1
0406-001204	CD81	DIODE-TVS	1
0406-001204	CD82	DIODE-TVS	1
0406-001204	CD83	DIODE-TVS	1
0501-000465	Q702	TR-SMALL SIGNAL	1
0504-001080	Q601	TR-DIGITAL	1
0504-001080	Q802	TR-DIGITAL	1
0506-000175	IC05	TR-ARRAY	1
0506-000175	IC06	TR-ARRAY	1
0604-001002	PC03	PHOTO-COUPLER	1
0604-001002	PC04	PHOTO-COUPLER	1
0604-001002	PC05	PHOTO-COUPLER	1
0801-000393	IC08	IC-CMOS LOGIC	1
1006-001325	IC07	IC-BUS TRANSCEIVER	1
1202-000104	IC11	IC-VOLTAGE COMP.	1
1203-006245	IC03	IC-VOL. DETECTOR	1
1203-007526	IC02	IC-POSI.FIXED REG.	1
2007-000029	R850	R-CHIP	1
2007-000029	R851	R-CHIP	1
2007-000070	R717	R-CHIP	1
2007-000076	R601	R-CHIP	1
2007-000076	R602	R-CHIP	1
2007-000076	R716	R-CHIP	1
2007-000078	R703	R-CHIP	1
2007-000078	R706	R-CHIP	1
2007-000078	R805	R-CHIP	1
2007-000078	R815	R-CHIP	1
2007-000084	R707	R-CHIP	1
2007-000087	R708	R-CHIP	1
2007-000090	R701	R-CHIP	1
2007-000090	R704	R-CHIP	1
2007-000090	R705	R-CHIP	1
2007-000090	R723	R-CHIP	1
2007-000090	R801	R-CHIP	1
2007-000090	R802	R-CHIP	1

2007-000090	R803	R-CHIP	1
2007-000090	R804	R-CHIP	1
2007-000090	R816	R-CHIP	1
2007-000116	R825	R-CHIP	1
2007-000130	R715	R-CHIP	1
2007-000138	R508	R-CHIP	1
2007-000138	R515	R-CHIP	1
2007-000138	R516	R-CHIP	1
2007-000138	R517	R-CHIP	1
2007-000138	R518	R-CHIP	1
2007-000138	R519	R-CHIP	1
2007-000138	R520	R-CHIP	1
2007-000138	R539	R-CHIP	1
2007-000138	R542	R-CHIP	1
2007-000138	R809	R-CHIP	1
2007-000140	R538	R-CHIP	1
2007-000140	R545	R-CHIP	1
2007-000140	R806	R-CHIP	1
2007-000140	R901	R-CHIP	1
2007-000143	R511	R-CHIP	1
2007-000143	R512	R-CHIP	1
2007-000143	R513	R-CHIP	1
2007-000148	R502	R-CHIP	1
2007-000148	R503	R-CHIP	1
2007-000148	R504	R-CHIP	1
2007-000148	R505	R-CHIP	1
2007-000148	R506	R-CHIP	1
2007-000148	R507	R-CHIP	1
2007-000148	R510	R-CHIP	1
2007-000148	R521	R-CHIP	1
2007-000148	R522	R-CHIP	1
2007-000148	R523	R-CHIP	1
2007-000148	R524	R-CHIP	1
2007-000148	R525	R-CHIP	1
2007-000148	R526	R-CHIP	1
2007-000148	R527	R-CHIP	1
2007-000148	R528	R-CHIP	1
2007-000148	R529	R-CHIP	1
2007-000148	R530	R-CHIP	1
2007-000148	R531	R-CHIP	1
2007-000148	R532	R-CHIP	1
2007-000148	R533	R-CHIP	1
2007-000148	R534	R-CHIP	1
2007-000148	R543	R-CHIP	1
2007-000148	R544	R-CHIP	1
2007-000148	R807	R-CHIP	1
2007-000148	R808	R-CHIP	1
2007-000148	R810	R-CHIP	1
2007-000148	R824	R-CHIP	1
2007-000148	R903	R-CHIP	1
2007-000148	R904	R-CHIP	1
2007-000157	R902	R-CHIP	1
2007-000162	R820	R-CHIP	1
2007-000162	R821	R-CHIP	1
2007-000171	R831	R-CHIP	1
2007-000171	R833	R-CHIP	1
2007-000171	R835	R-CHIP	1
2007-000171	R837	R-CHIP	1
2007-000171	R839	R-CHIP	1
2007-000171	R843	R-CHIP	1
2007-000303	R702	R-CHIP	1
2007-000385	R115	R-CHIP	1
2007-000455	R712	R-CHIP	1
2007-000475	R709	R-CHIP	1
2007-000583	R714	R-CHIP	1
2007-000924	R112	R-CHIP	1
2007-000924	R113	R-CHIP	1
2007-000924	R114	R-CHIP	1
2007-000939	R711	R-CHIP	1
2007-000979	R713	R-CHIP	1

INDOOR MAIN PCB (DB92-02873C)

2007-001313	R404	R-CHIP	1
2007-001313	R405	R-CHIP	1
2007-001313	R406	R-CHIP	1
2007-001313	R410	R-CHIP	1
2007-001313	R811	R-CHIP	1
2007-001433	R618	R-CHIP	1
2007-007313	R401	R-CHIP	1
2007-007313	R402	R-CHIP	1
2007-007313	R403	R-CHIP	1
2007-009922	R301	R-CHIP	1
2007-009922	R302	R-CHIP	1
2007-009922	R303	R-CHIP	1
2203-000257	C705	C-CER,CHIP	1
2203-000257	C801	C-CER,CHIP	1
2203-000438	C508	C-CER,CHIP	1
2203-000438	C516	C-CER,CHIP	1
2203-000438	C520	C-CER,CHIP	1
2203-000438	C901	C-CER,CHIP	1
2203-000440	C711	C-CER,CHIP	1
2203-000440	C715	C-CER,CHIP	1
2203-001071	C519	C-CER,CHIP	1
2203-005249	C401	C-CER,CHIP	1
2203-005249	C402	C-CER,CHIP	1
2203-005249	C403	C-CER,CHIP	1
2203-005249	C511	C-CER,CHIP	1
2203-005249	C513	C-CER,CHIP	1
2203-005249	C514	C-CER,CHIP	1
2203-005249	C517	C-CER,CHIP	1
2203-005249	C522	C-CER,CHIP	1
2203-005249	C529	C-CER,CHIP	1
2203-005249	C530	C-CER,CHIP	1
2203-005249	C531	C-CER,CHIP	1
2203-005249	C533	C-CER,CHIP	1
2203-005249	C702	C-CER,CHIP	1
2203-005249	C704	C-CER,CHIP	1
2203-005249	C710	C-CER,CHIP	1
2203-005249	C712	C-CER,CHIP	1
2203-005249	C713	C-CER,CHIP	1
2203-005249	C802	C-CER,CHIP	1
2203-005249	C803	C-CER,CHIP	1
2203-005249	C805	C-CER,CHIP	1
2203-005249	C806	C-CER,CHIP	1
2203-005249	C807	C-CER,CHIP	1
2203-005249	C809	C-CER,CHIP	1
2203-006496	C707	C-CER,CHIP	1
2203-006960	C708	C-CER,CHIP	1
2203-007486	C509	C-CER,CHIP	1
2203-007486	C512	C-CER,CHIP	1
2203-007486	C515	C-CER,CHIP	1
2203-007486	C518	C-CER,CHIP	1
2203-007486	C521	C-CER,CHIP	1
2203-007486	C523	C-CER,CHIP	1
2203-007486	C526	C-CER,CHIP	1
2203-007486	C528	C-CER,CHIP	1
2203-007486	C551	C-CER,CHIP	1
2203-007486	C552	C-CER,CHIP	1
2203-007486	C804	C-CER,CHIP	1
2203-007486	C808	C-CER,CHIP	1
2402-000120	C706	C-AL,SMD	1
2402-001145	C701	C-AL,SMD	1
2402-001145	C703	C-AL,SMD	1
2802-001211	X501	RESONATOR-CERAMIC	1
DB41-01221A	PCB MAIN	PCB MAIN	1
DB91-01550B	-	ASSY MICOM	1
0903-001864	-	IC-MICROCONTROLLER	1
DB98-31449A	ASSY-LABEL MICOM	ASSY-LABEL MICOM	1

INDOOR DISPLAY PBA(DB92-02877) - 7-SEG

Parts Code	Design Loc	Quantity	Parts Description	Spec.
3711-003848	CN01	1	HEADER-BOARD TO CABLE	BOX, 11P, 1R, 2mm, ANGLE, SN, WHT
3711-003942	CN03	1	HEADER-BOARD TO CABLE	BOX, 2P, 1R, 2mm, STRAIGHT, SN, WHT
3711-004379	CN02	1	HEADER-BOARD TO CABLE	BOX, 4P, 1R, 2mm, STRAIGHT, SN, WHT
3711-004379	CN05	1	HEADER-BOARD TO CABLE	BOX, 4P, 1R, 2mm, STRAIGHT, SN, WHT
3711-005096	CN04	1	HEADER-BOARD TO CABLE	BOX, 5P, 1R, 2MM, STRAIGHT, SN, BLK
DB07-00188A	IC02	1	LED DISPLAY	WHITE, TRAY, 390x360, 29.0x23.0x13.5, TRAY, 390x360, 29.0x23.0x13.5
DB94-04104A		1	ASSY PCB AUTO	BETTER, BEST, A3050, 64*36, DB92-02877A
0601-003285	LED1	1	LED	ROUND, BLUE, 3.1mm, 3.9x5.4mm
0601-003285	LED2	1	LED	ROUND, BLUE, 3.1mm, 3.9x5.4mm
DB94-04105A		1	ASSY PCB SMD	BETTER, BEST, A3050, 64*36, DB92-02877A
0403-000258	ZD01	1	DIODE-ZENER	BZX84C5V6, 5.2-6V, 225mW, SOT-23, TP
0504-001080	Q01	1	TR-DIGITAL	KRC246S, NPN, 200mW, 2.2K/10Kohm, SOT-23, TP
1003-002078	IC01	1	IC-LED DRIVER	STLED316S, SO24, 24P, 7.55x15.48mm, -, 320mA, TP, PLASTIC, 5V, -45+85, 1200 mW, 0.4, IC LED DRIVER
2007-000070	R05	1	R-CHIP	0ohm, 5%, 1/10W, TP, 1608
2007-000078	R03	1	R-CHIP	1Kohm, 5%, 1/10W, TP, 1608
2007-000084	R07	1	R-CHIP	4.7Kohm, 5%, 1/10W, TP, 1608
2007-000090	R02	1	R-CHIP	10Kohm, 5%, 1/10W, TP, 1608
2007-000090	R04	1	R-CHIP	10Kohm, 5%, 1/10W, TP, 1608
2007-000090	R06	1	R-CHIP	10Kohm, 5%, 1/10W, TP, 1608
2203-000027	C04	1	C-CER, CHIP	10nF, 10%, 50V, X7R, TP, 1608, -
2203-000440	C03	1	C-CER, CHIP	1nF, 10%, 50V, X7R, TP, 1608
2203-005249	C02	1	C-CER, CHIP	100nF, 10%, 50V, X7R, TP, 1608
2203-005249	C05	1	C-CER, CHIP	100nF, 10%, 50V, X7R, TP, 1608
2402-001368	C01	1	C-AL, SMD	47uF, 20%, 25V, TP, 6.3x4.9mm
DB41-01225A	PCB DISPLAY	1	PCB DISPLAY	FR-4, 2Layer, 64*36, BETTER, BEST, 1Oz, 165*192

6-4 OUTDOOR MAIN PBA(DB92-02866A) - 9K/12K

Parts Code	Design Loc	Description	Spec.	QTY
0401-001099	D020	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D021	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D030	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D152	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D153	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D454	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D500	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D501	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D502	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D503	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D504	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D505	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D507	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D508	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D904	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D905	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0402-001795	D903	DIODE-RECTIFIER	US1M,1000V,1A,SMA,TP	1
0403-001499	ZD401	DIODE-ZENER	MMSZ5252B,22.8/25.2V,500mW,SOD-123,TP	1
0403-001499	ZD420	DIODE-ZENER	MMSZ5252B,22.8/25.2V,500mW,SOD-123,TP	1
0404-001020	D491	DIODE-SCHOTTKY	BAT54C,30V,200mA,SOT-23,TP	1
0404-001020	D492	DIODE-SCHOTTKY	BAT54C,30V,200mA,SOT-23,TP	1
0406-001204	TD301	DIODE-TVS	SMB□5.0CA,6.4/-/7.25V,600W,SMB	1
0406-001204	TD302	DIODE-TVS	SMB□5.0CA,6.4/-/7.25V,600W,SMB	1
0406-001204	TD303	DIODE-TVS	SMB□5.0CA,6.4/-/7.25V,600W,SMB	1
0501-000465	Q551	TR-SMALL SIGNAL	MMBT3904,NPN,350mW,SOT-23,TP,30-300	1
0504-001008	Q351	TR-DIGITAL	RN2427,PNP,200mW,2.2K/10Kohm,SOT-23,TP	1
0504-001008	Q352	TR-DIGITAL	RN2427,PNP,200mW,2.2K/10Kohm,SOT-23,TP	1
0504-001008	Q901	TR-DIGITAL	RN2427,PNP,200mW,2.2K/10Kohm,SOT-23,TP	1
0504-001008	Q903	TR-DIGITAL	RN2427,PNP,200mW,2.2K/10Kohm,SOT-23,TP	1
0504-001044	Q151	TR-DIGITAL	KRA226M,PNP,400MW,2.2K/10K,TO-92M,TP	1
0504-001080	Q902	TR-DIGITAL	KRC246S,NPN,200mW,2.2K/10Kohm,SOT-23,TP	1
0506-000175	IC061	TR-ARRAY	2003,NPN,7,1W,SOP-16,ST,1000	1
0506-000175	IC701	TR-ARRAY	2003,NPN,7,1W,SOP-16,ST,1000	1
0506-000175	IC702	TR-ARRAY	2003,NPN,7,1W,SOP-16,ST,1000	1
0601-002423	LED801	LED	SMD(REVERSE),RED,3.2x1.6mm,639nm,3.2x1.6x1.1mm	1
0601-002955	LED803	LED	SMD(REVERSE),YEL,1.6x1.5mm,588nm,3.2x1.6x1.1mm	1
0601-002956	LED551	LED	SMD(REVERSE),GRN,1.6x1.5mm,3.2x1.6x1.1mm	1
0601-002956	LED802	LED	SMD(REVERSE),GRN,1.6x1.5mm,3.2x1.6x1.1mm	1
0604-001172	PC151	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1
0604-001172	PC351	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1
0604-001172	PC352	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1
0801-000393	IC302	IC-CMOS LOGIC	74HC86,OR GATE,SOP,14P,150MIL,QUAD,ST,-,2.0/6.0V,0.26V,-40to+85C,180mW,4.2V,1uA,	1
1006-001325	IC301	IC-BUS TRANSCEIVER	ISL81487LIBZ,SO,8P,4.9x3.8 mm,SINGLE,ST,PLASTIC,5V,-40to+85C,520mW,1,1,1.5/5.0V	1
1201-002946	IC451	IC-OP AMP	TSSOP,TR,14P,5x4.4x1.2mm,100,5.5V,-40to+85C,63dB,1,1nA,1nA,1.7mV	1
1203-002835	IC154	IC-POSI.FIXED REG.	7805,3P,6.6x6.1mm,PLASTIC,4.8V/5.2V,1.3W,-40to+85,1A,TP	1
1203-002986	IC155	IC-POSI.FIXED REG.	7812,3P,6.6x6.1mm,PLASTIC,11.5/12.5V,1.3,150C,1A,TP	1
1203-004967	IC502	IC-VOL. DETECTOR	KIA7042AT,TSM,3P,2.9x1.6mm,PLASTIC,4.2V,350mW,-30to+75C,20mA,-,-	1
1404-001498	PTC020	THERMISTOR-PTC	40ohm,25□ ,290Vac,7A,TR	1
1405-000154	VA002	VARISTOR	560V,460Vdc,4500A,17.5x7.5mm,BK,920V,600pF	1
1405-000154	VA003	VARISTOR	560V,460Vdc,4500A,17.5x7.5mm,BK,920V,600pF	1
1405-001239	VA001	VARISTOR	680V,560Vdc,6000A,17x7.3mm,BK,1120V,350pF	1
1405-001239	VA401	VARISTOR	680V,560Vdc,6000A,17x7.3mm,BK,1120V,350pF	1
2007-000043	R424	R-CHIP	1Kohm,1□ ,1/10W,TP,1608	1
2007-000070	R309	R-CHIP	0ohm,5□ ,1/10W,TP,1608	1
2007-000074	R152	R-CHIP	100ohm,5□ ,1/10W,TP,1608	1
2007-000074	R210	R-CHIP	100ohm,5□ ,1/10W,TP,1608	1
2007-000074	R213	R-CHIP	100ohm,5□ ,1/10W,TP,1608	1
2007-000074	R233	R-CHIP	100ohm,5□ ,1/10W,TP,1608	1
2007-000074	R234	R-CHIP	100ohm,5□ ,1/10W,TP,1608	1
2007-000074	R401	R-CHIP	100ohm,5□ ,1/10W,TP,1608	1

OUTDOOR MAIN PBA(DB92-02866A) - 9K/12K (cont.)

Parts Code	Design Loc	Description	Spec.	QTY
2007-000074	R402	R-CHIP	100ohm,5% ,1/10W,TP,1608	1
2007-000074	R403	R-CHIP	100ohm,5% ,1/10W,TP,1608	1
2007-000074	R404	R-CHIP	100ohm,5% ,1/10W,TP,1608	1
2007-000074	R405	R-CHIP	100ohm,5% ,1/10W,TP,1608	1
2007-000074	R406	R-CHIP	100ohm,5% ,1/10W,TP,1608	1
2007-000074	R407	R-CHIP	100ohm,5% ,1/10W,TP,1608	1
2007-000074	R420	R-CHIP	100ohm,5% ,1/10W,TP,1608	1
2007-000074	R422	R-CHIP	100ohm,5% ,1/10W,TP,1608	1
2007-000074	R516	R-CHIP	100ohm,5% ,1/10W,TP,1608	1
2007-000074	R519	R-CHIP	100ohm,5% ,1/10W,TP,1608	1
2007-000074	R562	R-CHIP	100ohm,5% ,1/10W,TP,1608	1
2007-000076	R153	R-CHIP	330ohm,5% ,1/10W,TP,1608	1
2007-000076	R255	R-CHIP	330ohm,5% ,1/10W,TP,1608	1
2007-000076	R256	R-CHIP	330ohm,5% ,1/10W,TP,1608	1
2007-000076	R257	R-CHIP	330ohm,5% ,1/10W,TP,1608	1
2007-000076	R258	R-CHIP	330ohm,5% ,1/10W,TP,1608	1
2007-000076	R352	R-CHIP	330ohm,5% ,1/10W,TP,1608	1
2007-000076	R353	R-CHIP	330ohm,5% ,1/10W,TP,1608	1
2007-000076	R512	R-CHIP	330ohm,5% ,1/10W,TP,1608	1
2007-000076	R567	R-CHIP	330ohm,5% ,1/10W,TP,1608	1
2007-000076	R904	R-CHIP	330ohm,5% ,1/10W,TP,1608	1
2007-000078	R303	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R307	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R308	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R351	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R354	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R503	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R504	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R505	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R508	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R509	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R515	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R529	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R530	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R556	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R557	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R558	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R560	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R563	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000080	R522	R-CHIP	2Kohm,5% ,1/10W,TP,1608	1
2007-000082	R421	R-CHIP	3.3Kohm,5% ,1/10W,TP,1608	1
2007-000084	R211	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R212	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R214	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R215	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R216	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R217	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R218	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R219	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R220	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R408	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R501	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R506	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R507	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R510	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R511	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R517	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R518	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R520	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R521	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R523	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R524	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R525	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R526	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1

OUTDOOR MAIN PBA(DB92-02866A) - 9K/12K (cont.)

Parts Code	Design Loc	Description	Spec.	QTY
2007-000084	R527	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R534	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R535	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R536	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R903	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000090	R301	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R302	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R304	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R305	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R528	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R532	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R533	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R551	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R552	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R553	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R554	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R555	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R559	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R565	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000109	R531	R-CHIP	1Mohm,5% ,1/10W,TP,1608	1
2007-000116	R306	R-CHIP	120ohm,5% ,1/10W,TP,1608	1
2007-000124	R564	R-CHIP	2.2Kohm,5% ,1/10W,TP,1608	1
2007-000140	R202	R-CHIP	1Kohm,5% ,1/16W,TP,1005	1
2007-000140	R205	R-CHIP	1Kohm,5% ,1/16W,TP,1005	1
2007-000143	R207	R-CHIP	4.7Kohm,5% ,1/16W,TP,1005	1
2007-000143	R221	R-CHIP	4.7Kohm,5% ,1/16W,TP,1005	1
2007-000143	R222	R-CHIP	4.7Kohm,5% ,1/16W,TP,1005	1
2007-000143	R223	R-CHIP	4.7Kohm,5% ,1/16W,TP,1005	1
2007-000143	R224	R-CHIP	4.7Kohm,5% ,1/16W,TP,1005	1
2007-000143	R225	R-CHIP	4.7Kohm,5% ,1/16W,TP,1005	1
2007-000143	R226	R-CHIP	4.7Kohm,5% ,1/16W,TP,1005	1
2007-000143	R227	R-CHIP	4.7Kohm,5% ,1/16W,TP,1005	1
2007-000143	R228	R-CHIP	4.7Kohm,5% ,1/16W,TP,1005	1
2007-000143	R229	R-CHIP	4.7Kohm,5% ,1/16W,TP,1005	1
2007-000143	R230	R-CHIP	4.7Kohm,5% ,1/16W,TP,1005	1
2007-000143	R231	R-CHIP	4.7Kohm,5% ,1/16W,TP,1005	1
2007-000143	R232	R-CHIP	4.7Kohm,5% ,1/16W,TP,1005	1
2007-000148	R203	R-CHIP	10Kohm,5% ,1/16W,TP,1005	1
2007-000148	R204	R-CHIP	10Kohm,5% ,1/16W,TP,1005	1
2007-000148	R206	R-CHIP	10Kohm,5% ,1/16W,TP,1005	1
2007-000170	R201	R-CHIP	1Mohm,5% ,1/16W,TP,1005	1
2007-000239	R491	R-CHIP	1.5Kohm,1% ,1/10W,TP,1608	1
2007-000256	R455	R-CHIP	1.6Kohm,1% ,1/10W,TP,1608	1
2007-000256	R457	R-CHIP	1.6Kohm,1% ,1/10W,TP,1608	1
2007-000256	R468	R-CHIP	1.6Kohm,1% ,1/10W,TP,1608	1
2007-000300	R901	R-CHIP	10Kohm,5% ,1/8W,TP,2012	1
2007-000385	R101	R-CHIP	14.3Kohm,1% ,1/4W,TP,3216	1
2007-000385	R105	R-CHIP	14.3Kohm,1% ,1/4W,TP,3216	1
2007-000455	R251	R-CHIP	18Kohm,1% ,1/10W,TP,1608	1
2007-000455	R253	R-CHIP	18Kohm,1% ,1/10W,TP,1608	1
2007-000491	R561	R-CHIP	2.2Kohm,1% ,1/10W,TP,1608	1
2007-000536	R492	R-CHIP	200ohm,1% ,1/10W,TP,1608	1
2007-000537	R154	R-CHIP	200ohm,1% ,1/4W,TP,3216	1
2007-000537	R155	R-CHIP	200ohm,1% ,1/4W,TP,3216	1
2007-000537	R156	R-CHIP	200ohm,1% ,1/4W,TP,3216	1
2007-000537	R157	R-CHIP	200ohm,1% ,1/4W,TP,3216	1
2007-000537	R158	R-CHIP	200ohm,1% ,1/4W,TP,3216	1
2007-000614	R252	R-CHIP	24Kohm,1% ,1/10W,TP,1608	1
2007-000614	R254	R-CHIP	24Kohm,1% ,1/10W,TP,1608	1
2007-000614	R469	R-CHIP	24Kohm,1% ,1/10W,TP,1608	1
2007-000614	R470	R-CHIP	24Kohm,1% ,1/10W,TP,1608	1
2007-000614	R471	R-CHIP	24Kohm,1% ,1/10W,TP,1608	1
2007-000614	R472	R-CHIP	24Kohm,1% ,1/10W,TP,1608	1
2007-000614	R473	R-CHIP	24Kohm,1% ,1/10W,TP,1608	1

OUTDOOR MAIN PBA(DB92-02866A) - 9K/12K (cont.)

Parts Code	Design Loc	Description	Spec.	QTY
2007-000614	R474	R-CHIP	24Kohm,1% ,1/10W,TP,1608	1
2007-000651	R475	R-CHIP	27Kohm,1% ,1/10W,TP,1608	1
2007-000683	R454	R-CHIP	3.3Kohm,1% ,1/10W,TP,1608	1
2007-000683	R459	R-CHIP	3.3Kohm,1% ,1/10W,TP,1608	1
2007-000683	R466	R-CHIP	3.3Kohm,1% ,1/10W,TP,1608	1
2007-000763	R476	R-CHIP	330ohm,1% ,1/10W,TP,1608	1
2007-000763	R477	R-CHIP	330ohm,1% ,1/10W,TP,1608	1
2007-000872	R801	R-CHIP	4.7Kohm,5% ,1/8W,TP,2012	1
2007-000872	R802	R-CHIP	4.7Kohm,5% ,1/8W,TP,2012	1
2007-000872	R803	R-CHIP	4.7Kohm,5% ,1/8W,TP,2012	1
2007-000924	R102	R-CHIP	470Kohm,1% ,1/4W,TP,3216	1
2007-000924	R103	R-CHIP	470Kohm,1% ,1/4W,TP,3216	1
2007-000924	R104	R-CHIP	470Kohm,1% ,1/4W,TP,3216	1
2007-000924	R106	R-CHIP	470Kohm,1% ,1/4W,TP,3216	1
2007-000924	R107	R-CHIP	470Kohm,1% ,1/4W,TP,3216	1
2007-000924	R108	R-CHIP	470Kohm,1% ,1/4W,TP,3216	1
2007-000979	R478	R-CHIP	5.6Kohm,1% ,1/10W,TP,1608	1
2007-001071	R902	R-CHIP	6.8Kohm,5% ,1/8W,TP,2012	1
2007-001175	R409	R-CHIP	8.2Kohm,1% ,1/10W,TP,1608	1
2007-001175	R423	R-CHIP	8.2Kohm,1% ,1/10W,TP,1608	1
2007-001175	R427	R-CHIP	8.2Kohm,1% ,1/10W,TP,1608	1
2007-010245	R410	R-CHIP	0.01ohm,1% ,2W,TP,6432	1
2007-010245	R411	R-CHIP	0.01ohm,1% ,2W,TP,6432	1
2007-010245	R412	R-CHIP	0.01ohm,1% ,2W,TP,6432	1
2007-010245	R425	R-CHIP	0.01ohm,1% ,2W,TP,6432	1
2007-010245	R426	R-CHIP	0.01ohm,1% ,2W,TP,6432	1
2201-000540	C425	C-CERAMIC,DISC	4.7nF,20% ,2000V,Y5U,12x5mm,10mm	1
2201-002002	C004	C-CERAMIC,DISC	4.7nF,20% ,400V,Y5U,16x6mm,10mm	1
2201-002002	C005	C-CERAMIC,DISC	4.7nF,20% ,400V,Y5U,16x6mm,10mm	1
2201-002002	C012	C-CERAMIC,DISC	4.7nF,20% ,400V,Y5U,16x6mm,10mm	1
2201-002002	C013	C-CERAMIC,DISC	4.7nF,20% ,400V,Y5U,16x6mm,10mm	1
2201-002427	C901	C-CERAMIC,DISC	2.2nF,K(10%),2000V,Y5P,12.5x5mm,7.5mm	1
2203-000236	C421	C-CER,CHIP	0.1nF,5% ,50V,C0G,TP,1608	1
2203-000257	C222	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C223	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C224	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C225	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C301	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C351	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C352	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C422	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C423	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000440	C404	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C405	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C406	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C408	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C409	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C410	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C411	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C501	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C504	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C505	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C506	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C507	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C508	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C510	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C512	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C523	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C904	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000783	C455	C-CER,CHIP	0.33nF,5% ,50V,C0G,TP,1608	1
2203-000783	C458	C-CER,CHIP	0.33nF,5% ,50V,C0G,TP,1608	1
2203-002002	C453	C-CER,CHIP	0.033nF,5% ,50V,NP0,TP,1608	1
2203-002002	C454	C-CER,CHIP	0.033nF,5% ,50V,NP0,TP,1608	1
2203-002002	C459	C-CER,CHIP	0.033nF,5% ,50V,NP0,TP,1608	1

OUTDOOR MAIN PBA(DB92-02866A) - 9K/12K (cont.)

Parts Code	Design Loc	Description	Spec.	QTY
2203-002002	C515	C-CER,CHIP	0.033nF,5% ,50V,NP0,TP,1608	1
2203-002002	C516	C-CER,CHIP	0.033nF,5% ,50V,NP0,TP,1608	1
2203-002002	C517	C-CER,CHIP	0.033nF,5% ,50V,NP0,TP,1608	1
2203-002002	C518	C-CER,CHIP	0.033nF,5% ,50V,NP0,TP,1608	1
2203-002002	C519	C-CER,CHIP	0.033nF,5% ,50V,NP0,TP,1608	1
2203-002398	C524	C-CER,CHIP	22nF,10% ,50V,X7R,TP,1608	1
2203-005249	C061	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C151	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C152	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C153	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C154	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C162	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C163	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C220	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C221	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C251	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C252	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C253	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C254	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C302	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C303	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C304	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C305	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C306	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C307	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C401	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C402	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C403	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C407	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C420	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C424	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C460	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C503	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C509	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C511	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C514	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C520	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C521	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C525	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C526	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C527	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C701	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C702	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C703	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C704	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C903	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-006158	C201	C-CER,CHIP	100nF,10% ,16V,X7R,TP,1005,0.5T	1
2203-006158	C203	C-CER,CHIP	100nF,10% ,16V,X7R,TP,1005,0.5T	1
2203-006158	C204	C-CER,CHIP	100nF,10% ,16V,X7R,TP,1005,0.5T	1
2203-006158	C206	C-CER,CHIP	100nF,10% ,16V,X7R,TP,1005,0.5T	1
2203-006158	C207	C-CER,CHIP	100nF,10% ,16V,X7R,TP,1005,0.5T	1
2203-006158	C208	C-CER,CHIP	100nF,10% ,16V,X7R,TP,1005,0.5T	1
2203-006158	C210	C-CER,CHIP	100nF,10% ,16V,X7R,TP,1005,0.5T	1
2203-006158	C211	C-CER,CHIP	100nF,10% ,16V,X7R,TP,1005,0.5T	1
2203-006158	C212	C-CER,CHIP	100nF,10% ,16V,X7R,TP,1005,0.5T	1
2203-006460	C522	C-CER,CHIP	2200nF,10% ,16V,X5R,TP,1608,-	1
2203-006960	C902	C-CER,CHIP	1000nF,10% ,50V,X7R,TP,2012	1
2203-007456	C202	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1005,0.5T	1
2203-007456	C205	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1005,0.5T	1
2203-007456	C209	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1005,0.5T	1
2203-007456	C213	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1005,0.5T	1
2203-007456	C214	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1005,0.5T	1
2203-007456	C226	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1005,0.5T	1

OUTDOOR MAIN PBA(DB92-02866A) - 9K/12K (cont.)

Parts Code	Design Loc	Description	Spec.	QTY
2203-007456	C227	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1005,0.5T	1
2203-007456	C228	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1005,0.5T	1
2203-007456	C229	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1005,0.5T	1
2301-001285	C001	C-FILM,LEAD-PPF	680nF,10% ,275V,BK,31x11x21mm	1
2301-001285	C006	C-FILM,LEAD-PPF	680nF,10% ,275V,BK,31x11x21mm	1
2306-000123	C412	C-FILM,LEAD-PPF	100nF,5% ,630V,BK,26x16.5x8.5mm	1
2401-000303	CE162	C-AL	100uF,20% ,25V,WT,TP,6.3x11mm,5mm	1
2401-000303	CE163	C-AL	100uF,20% ,25V,WT,TP,6.3x11mm,5mm	1
2401-001838	CE151	C-AL	470uF,20% ,25V,WT,TP,10x16,5mm	1
2401-002438	CE902	C-AL	47uF,20% ,50V,WT,TP,6.3x11,5mm	1
2401-003224	CE152	C-AL	470uF,20% ,16V,WT,TP,8X11.5,5mm	1
2401-003585	CE901	C-AL	220uF,20% ,35V,WT,TP,8x11.5mm,5	1
2401-004874	CE101	C-AL	330uF,20% ,400V,BK,25.4X50,10mm	1
2401-004874	CE102	C-AL	330uF,20% ,400V,BK,25.4X50,10mm	1
2401-004874	CE103	C-AL	330uF,20% ,400V,BK,25.4X50,10mm	1
2402-001183	CE451	C-AL,SMD	22UF,20% ,16V,WT,TP,5.3X5.3X6MM	1
2402-001268	CE153	C-AL,SMD	100uF,20% ,25V,WT,TP,8x6.3mm	1
2402-001268	CE404	C-AL,SMD	100uF,20% ,25V,WT,TP,8x6.3mm	1
2402-001268	CE420	C-AL,SMD	100uF,20% ,25V,WT,TP,8x6.3mm	1
2402-001368	CE401	C-AL,SMD	47uF,20% ,25V,TP,6.3x4.9mm	1
2402-001368	CE402	C-AL,SMD	47uF,20% ,25V,TP,6.3x4.9mm	1
2402-001368	CE403	C-AL,SMD	47uF,20% ,25V,TP,6.3x4.9mm	1
2802-001165	X201	RESONATOR-CERAMIC	4MHz,0.5% ,TP,4.5x2.0x1.15mm	1
2802-001211	X501	RESONATOR-CERAMIC	8MHZ,0.1% ,TP,3.2X1.3X0.9 MM	1
3501-001154	RY022	RELAY-MINIATURE	12V,200mW,3000mA,1FormA,10ms,10ms	1
3501-001154	RY030	RELAY-MINIATURE	12V,200mW,3000mA,1FormA,10ms,10ms	1
3501-001279	RY021	RELAY-POWER	12V DC,400mW,16000mA,1Form A,15mS,5mS	1
3601-001538	F001	FUSE-AXIAL LEAD	250V,15A,TIME-LAG,CERAMIC,6.35x31.8mm	1
3711-000015	CN203	HEADER-BOARD TO CABLE	BOX,2P,1R,2.5MM,STRAIGHT,SN,WHT	1
3711-000024	CN202	HEADER-BOARD TO CABLE	BOX,3P,1R,2.5MM,STRAIGHT,SN,WHT	1
3711-000177	CN301	HEADER-BOARD TO CABLE	1WALL,2P,1R,3.96MM,STRAIGHT,SN,RED	1
3711-000203	CN030	HEADER-BOARD TO CABLE	1WALL,2P/3P,1R,7.92mm,STRAIGHT,SN,WHT	1
3711-000296	CN901	HEADER-BOARD TO CABLE	1WALL,6P,1R,3.96MM,STRAIGHT,SN,WHT	1
3711-000760	CN551	HEADER-BOARD TO CABLE	BOX,20P,2R,2MM,ANGLE,SN,BLK	1
3711-000879	CN152	HEADER-BOARD TO CABLE	BOX,3P,1R,2.5mm,STRAIGHT,SN,BLU	1
3711-000880	CN151	HEADER-BOARD TO CABLE	BOX,3P,1R,2.5MM,STRAIGHT,SN,RED	1
3711-000998	CN701	CONNECTOR-HEADER	BOX,5P,1R,2.5MM,STRAIGHT,SN,RED	1
3711-000999	CN204	HEADER-BOARD TO CABLE	BOX,5P,1R,2.5mm,STRAIGHT,SN,WHT	1
3711-002001	CN201	HEADER-BOARD TO CABLE	BOX,20P,2R,2MM,STRAIGHT,SN,BLK	1
3711-003404	CN150	HEADER-BOARD TO CABLE	1WALL,2P,1R,7.92mm,STRAIGHT,SN,BLU	1
3711-003843	CN251	HEADER-BOARD TO CABLE	BOX,8P,1R,2mm,STRAIGHT,SN,WHT	1
3711-007656	CN402	HEADER-BOARD TO CABLE	BOX,3,1R,6mm,STRAIGHT,WHT	1
3711-007659	CN401	HEADER-BOARD TO CABLE	BOX,2,1R,7.92mm,STRAIGHT,WHT	1
3711-007817	CN501	HEADER-BOARD TO BOARD	3WALL,7P,1R,2mm,STRAIGHT,SN,WHT	1
3712-001047	CN003	CONNECTOR-Terminal	TAB,MALE,N,0.5/4.75mm	1
3712-001139	CN001	CONNECTOR-Terminal	TAB,MALE,6.35x0.8mm	1
3712-001139	CN002	CONNECTOR-Terminal	TAB,MALE,6.35x0.8mm	1
4715-001093	DSA001	SURGE ABSORBER	3600V,20% ,2000A,-,AXIAL	1
4719-002483	PFC050	POWER MODULE	Smart Power Module,FPAB20BH60B,600V,20A,89W,20kHz,PFCM	1
4719-002484	IPM400	POWER MODULE	Smart Power Module,FNA41560B2,600V,15A,41W,20kHz	1
DB27-00097A	FT001	COIL CHOKE	CC-35-15SS,SI,3.5mH,+50%-30% ,15mohm Max,15A,-25%+115	1
DB41-01227A	PCB MAIN	PCB MAIN	FR-4,2Layer,142%197,PF#2,OUTDOOR,2Oz,142%197	1
DB61-05296A	SUPPORT-IC	SUPPORT-IC	AFX-HD233A,PA66,FR50,BLACK	1
DB61-05916A	SUPPORT-PCB	SUPPORT-PCB	XS01_V2MD,HIPS,S834S1,15.5g,BLACK	1
DB91-01517A	IC501	ASSY MICOM	Soc 1Phase PF2,PF3,PF4,PF6,STM-125F-OA, HART-I910, 64LQFP, ROM 64KB	1
0903-001843	-	IC-MICROCONTROLLER	HART-I910,LQFP,64Z30,12x12mm,8MHz,5V,600mW,-40to+85C,12KB,64KB,Inverter SOC,Inverter SOC	1
DB91-01534A	IC201	ASSY MICOM	RAC A3050 Outdoor Micom,STM-130C-OS, S3FM02G, 128TQFP, ROM 384KB	1
DB09-00596A	-	IC MICOM	S3FM02G,128P,DC3V,TQFP,-40%+85,384K	1

6-5 OUTDOOR MAIN PBA(DB93-10939K) - 18K

Parts Code	Design Loc	Parts Description	Spec.	Quantity
1203-000002	IC107	IC-POSI.ADJUST REG.	431,TO-92,3P,-,PLASTIC,2.44/2.58V,775MV,0TO+70C,100MA,-,ST,-	1
1203-002735	IC104	IC-POSI.FIXED REG.	KIA7815API,TO-220IS,3P,10.3x15.3mm,PLASTIC,15V,2W,-30to+150,1A,-,ST	1
1203-006089	IC101	IC-PWM CONTROLLER	TOP253PN,DIP,7P,6.35x9.57mm,PLASTIC,-0.3V/700V,15W,-40Cto+150C,1.37A,ST	1
1404-001274	NTC101	THERMISTOR-NTC	22ohm,1.4A,3100K,9.5mW/C,-,7.0,-	1
1404-001498	PTC001	THERMISTOR-PTC	40ohm,25 ,290Vac,7A,TR	1
1405-000154	VA001	VARISTOR	560V,460Vdc,4500A,17.5x7.5mm,BK,920V,600pF	1
1405-000154	VA003	VARISTOR	560V,460Vdc,4500A,17.5x7.5mm,BK,920V,600pF	1
1405-000160	VA002	VARISTOR	680V,560Vdc,4500A,17.5x6.5mm,TP,1120V,250pF	1
1405-000160	VA101	VARISTOR	680V,560Vdc,4500A,17.5x6.5mm,TP,1120V,250pF	1
3501-001154	RY002	RELAY-MINIATURE	12V,200mW,3000mA,1FormA,10ms,10ms	1
3501-001154	RY003	RELAY-MINIATURE	12V,200mW,3000mA,1FormA,10ms,10ms	1
3501-001268	RY001	RELAY-POWER	12V,0.9W,25000mA,1FormA,20ms,10ms	1
3704-001601	IC701	SOCKET-IC	8P,SN,2.54mm	1
3711-000179	CN301	HEADER-BOARD TO CABLE	1WALL,2P,1R,3.96MM,STRAIGHT,SN,YEL	1
3711-000203	CN001	HEADER-BOARD TO CABLE	1WALL,2P/3P,1R,7.92mm,STRAIGHT,SN,WHT	1
3711-000880	CN513	HEADER-BOARD TO CABLE	BOX,3P,1R,2.5MM,STRAIGHT,SN,RED	1
3711-004019	CN901	CONNECTOR-HEADER	1WALL,6P,1R,3.96mm,ANGLE,SN,WHT	1
3711-004379	CN510	HEADER-BOARD TO CABLE	BOX,4P,1R,2mm,STRAIGHT,SN,WHT	1
3711-005096	CN509	HEADER-BOARD TO CABLE	BOX,5P,1R,2MM,STRAIGHT,SN,BLK	1
3711-005716	CN512	HEADER-BOARD TO CABLE	BOX,10P,1R,2mm,STRAIGHT,SN,BLK	1
3711-006337	CN503	CONNECTOR-HEADER	BOX,5P,1R,2.5mm,ANGLE,SN,RED	1
3711-006714	CN502	HEADER-BOARD TO CABLE	BOX,4P,1R,2.5mm,ANGLE,SN,RED	1
3711-006715	CN501	HEADER-BOARD TO CABLE	BOX,4P,1R,2.5mm,ANGLE,SN,WHT	1
3711-007706	CN201	HEADER-BOARD TO CABLE	BOX,10P,1R,2mm,STRAIGHT,SN,RED	1
3712-001047	EARTH	CONNECTOR-Terminal	TAB,MALE,N,0.5/4.75mm	1
3712-001139	REACTOR1	CONNECTOR-Terminal	TAB,MALE,6.35x0.8mm	1
3712-001139	REACTOR2	CONNECTOR-Terminal	TAB,MALE,6.35x0.8mm	1
3712-001139	TB-L	CONNECTOR-Terminal	TAB,MALE,6.35x0.8mm	1
3712-001139	TB-N	CONNECTOR-Terminal	TAB,MALE,6.35x0.8mm	1
3712-001139	U	CONNECTOR-Terminal	TAB,MALE,6.35x0.8mm	1
3712-001139	V	CONNECTOR-Terminal	TAB,MALE,6.35x0.8mm	1
3712-001139	W	CONNECTOR-Terminal	TAB,MALE,6.35x0.8mm	1
4719-002485	IPM	POWER MODULE	Smart Power Module,FSBB30CH60C,600V,30A,106W,20kHz	1
4719-002486	PFCM	POWER MODULE	Smart Power Module,FPAB30BH60B,600V,30A,104W,20kHz,PFCM	1
DB26-00120A	PT001	TRANS SWITCHING	EE2525,TOP253PN(SI-INV),220V,EE2525,18.6V, 12V, 6V,EE2525,50/60Hz,1.32mH,18.6V, 12V, 6V,SI-INVERTER, 12W	1
DB27-00034A	B405	COIL-BEAD	BI-3857,1.2uH MIN,-,-,1,-,-,BEAD,45 75ohm,5.7X3.5X61.5mm,-,20 60,TAPING	1
DB27-00070A	FT301	COIL CHOKE	CV005180SF3, SF2,18.0,+50 -30 ,430mohm,13 15 9,8.4/3.4,4.0,-30 +105	1
DB27-00078A	FT001	COIL FILTER	MALDIVE,12mH,22m,20A	1
DB61-05296A	-	SUPPORT-IC	AFX-HD233A,PA66,FR50,BLACK	2
DB94-04162B	-	ASSY PCB AUTO	OUTDOOR,A3050,Y,5V,12V,15V,3.3V,OLD PF#3,DB93-10939K	1
0402-000137	D101	DIODE-RECTIFIER	1N4007,1000V,1A,DO-41,TP	1
2003-000855	R101	R-METAL OXIDE(S)	47Kohm,5 ,3W,AA,TP,5.6x16mm	1
2009-001145	R413	R-METAL PLATE	0.005ohm,5 ,5W,AA,BK,14.5x5.0x18.0mm	1
2009-001145	R414	R-METAL PLATE	0.005ohm,5 ,5W,AA,BK,14.5x5.0x18.0mm	1
2009-001145	R415	R-METAL PLATE	0.005ohm,5 ,5W,AA,BK,14.5x5.0x18.0mm	1
2201-000322	C101	C-CERAMIC,DISC	2.2nF,10 ,2000V,Y5P,TP,13x5mm,10mm	1
2201-000322	C102	C-CERAMIC,DISC	2.2nF,10 ,2000V,Y5P,TP,13x5mm,10mm	1
2201-000322	C901	C-CERAMIC,DISC	2.2nF,10 ,2000V,Y5P,TP,13x5mm,10mm	1
2201-000446	C003	C-CERAMIC,DISC	3.3nF,20 ,400V,Y5U,TP,15x6mm,10mm	1
2201-000446	C004	C-CERAMIC,DISC	3.3nF,20 ,400V,Y5U,TP,15x6mm,10mm	1
2201-000446	C005	C-CERAMIC,DISC	3.3nF,20 ,400V,Y5U,TP,15x6mm,10mm	1
2201-000446	C006	C-CERAMIC,DISC	3.3nF,20 ,400V,Y5U,TP,15x6mm,10mm	1
2201-000540	C807	C-CERAMIC,DISC	4.7nF,20 ,2000V,Y5U,12x5mm,10mm	1
2201-000551	C114	C-CERAMIC,DISC	0.47nF,10 ,1000V,Y5P,6.3x5mm,5mm	1
2201-000987	C111	C-CERAMIC,DISC	2.2nF,20 ,400V,Y5U,TP,12.5x6mm,10mm	1
2201-000987	C112	C-CERAMIC,DISC	2.2nF,20 ,400V,Y5U,TP,12.5x6mm,10mm	1
2301-001285	C002	C-FILM,LEAD-PPF	680nF,10 ,275V,BK,31x11x21mm	1

OUTDOOR MAIN PBA(DB93-10939K) - 18K (cont.)

Parts Code	Design Loc	Parts Description	Spec.	Quantity
2301-001949	C001	C-FILM,LEAD	3300nF,10% ,275V,BK,31x21x31mm	1
2306-000123	C414	C-FILM,LEAD-PPF	100nF,5% ,630V,BK,26x16.5x8.5mm	1
2306-000123	C806	C-FILM,LEAD-PPF	100nF,5% ,630V,BK,26x16.5x8.5mm	1
2401-000481	CE109	C-AL	10uF,20% ,50V,WT,TP,5x11,5	1
2401-000880	CE901	C-AL	220uF,20% ,50V,WT,TP,10x16mm,5m	1
2401-001548	CE102	C-AL	47uF,20% ,25V,WT,TP,5x11,5	1
2401-001838	CE104	C-AL	470uF,20% ,25V,WT,TP,10x16,5mm	1
2401-001838	CE108	C-AL	470uF,20% ,25V,WT,TP,10x16,5mm	1
2401-001838	CE110	C-AL	470uF,20% ,25V,WT,TP,10x16,5mm	1
2401-002438	CE902	C-AL	47uF,20% ,50V,WT,TP,6.3x11,5mm	1
2401-003069	CE103	C-AL	470uF,20% ,50V,WT,TP,10x20mm,5	1
2401-003224	CE105	C-AL	470uF,20% ,16V,WT,TP,8X11.5,5mm	1
2401-003224	CE106	C-AL	470uF,20% ,16V,WT,TP,8X11.5,5mm	1
2401-003224	CE107	C-AL	470uF,20% ,16V,WT,TP,8X11.5,5mm	1
2401-003224	CE451	C-AL	470uF,20% ,16V,WT,TP,8X11.5,5mm	1
2401-004267	CE101	C-AL	22uF,20% ,500V,TP,16%25,7.5mm	1
2401-004929	CE001	C-AL	390uF,20% ,400V,BK,10mm	1
2401-004929	CE002	C-AL	390uF,20% ,400V,BK,10mm	1
2401-004929	CE003	C-AL	390uF,20% ,400V,BK,10mm	1
2401-004929	CE004	C-AL	390uF,20% ,400V,BK,10mm	1
2702-001110	L102	INDUCTOR-RADIAL	33uH,10% ,9.5x16mm	1
2702-001110	L103	INDUCTOR-RADIAL	33uH,10% ,9.5x16mm	1
3601-001652	F001	FUSE-AXIAL LEAD	250V,30A,TIME-LAG,CERAMIC,6.35x31.8mm	1
4715-001093	DSA001	SURGE ABSORBER	3600V,20% ,2000A,-,AXIAL	1
DB27-00034A	B401	COIL-BEAD	BI-3857,1.2uH MIN,-,-,1,-,-,BEAD,45%75ohm,5.7X3.5X61.5mm,-,20%60,TAPING	1
DB27-00034A	B402	COIL-BEAD	BI-3857,1.2uH MIN,-,-,1,-,-,BEAD,45%75ohm,5.7X3.5X61.5mm,-,20%60,TAPING	1
DB27-00034A	B403	COIL-BEAD	BI-3857,1.2uH MIN,-,-,1,-,-,BEAD,45%75ohm,5.7X3.5X61.5mm,-,20%60,TAPING	1
DB27-00034A	B404	COIL-BEAD	BI-3857,1.2uH MIN,-,-,1,-,-,BEAD,45%75ohm,5.7X3.5X61.5mm,-,20%60,TAPING	1
DB27-00034A	B901	COIL-BEAD	BI-3857,1.2uH MIN,-,-,1,-,-,BEAD,45%75ohm,5.7X3.5X61.5mm,-,20%60,TAPING	1
DB27-00034A	B902	COIL-BEAD	BI-3857,1.2uH MIN,-,-,1,-,-,BEAD,45%75ohm,5.7X3.5X61.5mm,-,20%60,TAPING	1
DB94-04162C	-	ASSY PCB SMD	OUTDOOR,A3050,Y,5V,12V,15V,3.3V,OLD PF#3,DB93-10939K	1
0401-001099	D001	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D002	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D003	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D201	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D202	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D204	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D205	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D206	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D207	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D208	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D501	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D502	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D503	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D504	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D901	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D902	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0402-001097	D106	DIODE-SCHOTTKY	B140,40V,1000mA,DO-214AC,TP	1
0402-001192	D103	DIODE-RECTIFIER	ES2D,200V,2A,SMB,TP	1
0402-001192	D104	DIODE-RECTIFIER	ES2D,200V,2A,SMB,TP	1
0402-001192	D105	DIODE-RECTIFIER	ES2D,200V,2A,SMB,TP	1
0402-001298	BD101	DIODE-BRIDGE	DF06S,600V,1A,SMD-4,TP	1
0402-001427	D102	DIODE-RECTIFIER	ES1D,200V,1A,DO-214AC,TP	1
0403-001499	ZD401	DIODE-ZENER	MMSZ5252B,22.8/25.2V,500mW,SOD-123,TP	1
0403-001499	ZD801	DIODE-ZENER	MMSZ5252B,22.8/25.2V,500mW,SOD-123,TP	1
0404-001020	D203	DIODE-SCHOTTKY	BAT54C,30V,200mA,SOT-23,TP	1
0404-001020	D401	DIODE-SCHOTTKY	BAT54C,30V,200mA,SOT-23,TP	1
0404-001020	D402	DIODE-SCHOTTKY	BAT54C,30V,200mA,SOT-23,TP	1

OUTDOOR MAIN PBA(DB93-10939K) - 18K (cont.)

Parts Code	Design Loc	Parts Description	Spec.	Quantity
0404-001020	D451	DIODE-SCHOTTKY	BAT54C,30V,200mA,SOT-23,TP	1
0404-001020	D452	DIODE-SCHOTTKY	BAT54C,30V,200mA,SOT-23,TP	1
0404-001020	D453	DIODE-SCHOTTKY	BAT54C,30V,200mA,SOT-23,TP	1
0404-001020	D454	DIODE-SCHOTTKY	BAT54C,30V,200mA,SOT-23,TP	1
0404-001020	D456	DIODE-SCHOTTKY	BAT54C,30V,200mA,SOT-23,TP	1
0406-001204	CD301	DIODE-TVS	SMB□5.0CA,6.4/-/7.25V,600W,SMB	1
0406-001204	CD302	DIODE-TVS	SMB□5.0CA,6.4/-/7.25V,600W,SMB	1
0406-001204	CD303	DIODE-TVS	SMB□5.0CA,6.4/-/7.25V,600W,SMB	1
0406-001204	CD304	DIODE-TVS	SMB□5.0CA,6.4/-/7.25V,600W,SMB	1
0407-000123	D601	DIODE-SWITCHING	DAN202K,80V,100mA,SOT-23,TP	1
0501-000463	Q651	TR-SMALL SIGNAL	KST2907A,PNP,350mW,SOT-23,TP,100-300	1
0501-000463	Q652	TR-SMALL SIGNAL	KST2907A,PNP,350mW,SOT-23,TP,100-300	1
0504-000127	Q902	TR-DIGITAL	F□V3102R,NPN,200mW,10K/10Kohm,SOT-23,TP	1
0506-000175	IC502	TR-ARRAY	2003,NPN,7,1W,SOP-16,ST,1000	1
0506-000175	IC503	TR-ARRAY	2003,NPN,7,1W,SOP-16,ST,1000	1
0601-002423	LED501	LED	SMD(REVERSE),RED,3.2x1.6mm,639nm,3.2x1.6x1.1mm	1
0601-002955	LED503	LED	SMD(REVERSE),YEL,1.6x1.5mm,588nm,3.2x1.6x1.1mm	1
0601-002956	LED201	LED	SMD(REVERSE),GRN,1.6x1.5mm,3.2x1.6x1.1mm	1
0601-002956	LED502	LED	SMD(REVERSE),GRN,1.6x1.5mm,3.2x1.6x1.1mm	1
0604-001172	IC103	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1
0604-001172	IC106	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1
0604-001172	IC202	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1
0604-001172	IC203	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1
0604-001172	IC651	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1
0801-000393	IC302	IC-CMOS LOGIC	74HC86,OR GATE,SOP,14P,150MIL,QUAD,ST,-,2.0/6.0V,0.26V,-40to+85C,180mW,4.2V,1uA,	1
1006-001325	IC301	IC-BUS TRANSCEIVER	ISL81487LIBZ,SO,8P,4.9x3.8 mm,SINGLE,ST,PLASTIC,5V,-40to+85C,520mW,1,1,1.5/5.0V	1
1201-002946	IC451	IC-OP AMP	TSSOP,TR,14P,5x4.4x1.2mm,100,5.5V,-40to+85C,63dB,1,1nA,1nA,1.7mV	1
1201-002946	IC452	IC-OP AMP	TSSOP,TR,14P,5x4.4x1.2mm,100,5.5V,-40to+85C,63dB,1,1nA,1nA,1.7mV	1
1202-000104	IC601	IC-VOLTAGE COMP.	393,SOP,8P,150MIL,DUAL,36V,CMOS,PLASTIC,18V,780mW,0to+70C,18V,5mV,250nA,50NA,30	1
1203-001211	IC204	IC-VOL. DETECTOR	7027,SOT-89,3P,PLASTIC,500mW,-30to+75,2.7V,TP	1
1203-005797	IC105	IC-DC/DC CONVERTER	SI-8008TMX-TL,TO263-5,5P,6.6x6.2x2.3mm,PLASTIC,0.8/24,1.65W,-40to+85C,1.5,0.784/0.816,TP	1
2007-000029	R115	R-CHIP	0ohm,5□ ,1/8W,TP,2012	1
2007-000043	R805	R-CHIP	1Kohm,1□ ,1/10W,TP,1608	1
2007-000052	R112	R-CHIP	10Kohm,1□ ,1/10W,TP,1608	1
2007-000052	R117	R-CHIP	10Kohm,1□ ,1/10W,TP,1608	1
2007-000066	R451	R-CHIP	20Kohm,1□ ,1/10W,TP,1608	1
2007-000066	R458	R-CHIP	20Kohm,1□ ,1/10W,TP,1608	1
2007-000066	R459	R-CHIP	20Kohm,1□ ,1/10W,TP,1608	1
2007-000066	R653	R-CHIP	20Kohm,1□ ,1/10W,TP,1608	1
2007-000070	R310	R-CHIP	0ohm,5□ ,1/10W,TP,1608	1
2007-000070	R662	R-CHIP	0ohm,5□ ,1/10W,TP,1608	1
2007-000074	R401	R-CHIP	100ohm,5□ ,1/10W,TP,1608	1
2007-000074	R402	R-CHIP	100ohm,5□ ,1/10W,TP,1608	1
2007-000074	R403	R-CHIP	100ohm,5□ ,1/10W,TP,1608	1
2007-000074	R404	R-CHIP	100ohm,5□ ,1/10W,TP,1608	1
2007-000074	R405	R-CHIP	100ohm,5□ ,1/10W,TP,1608	1
2007-000074	R406	R-CHIP	100ohm,5□ ,1/10W,TP,1608	1
2007-000074	R522	R-CHIP	100ohm,5□ ,1/10W,TP,1608	1
2007-000074	R801	R-CHIP	100ohm,5□ ,1/10W,TP,1608	1
2007-000074	R803	R-CHIP	100ohm,5□ ,1/10W,TP,1608	1
2007-000076	R208	R-CHIP	330ohm,5□ ,1/10W,TP,1608	1
2007-000076	R210	R-CHIP	330ohm,5□ ,1/10W,TP,1608	1
2007-000076	R505	R-CHIP	330ohm,5□ ,1/10W,TP,1608	1
2007-000076	R506	R-CHIP	330ohm,5□ ,1/10W,TP,1608	1
2007-000076	R507	R-CHIP	330ohm,5□ ,1/10W,TP,1608	1
2007-000076	R508	R-CHIP	330ohm,5□ ,1/10W,TP,1608	1
2007-000076	R517	R-CHIP	330ohm,5□ ,1/10W,TP,1608	1
2007-000076	R661	R-CHIP	330ohm,5□ ,1/10W,TP,1608	1

OUTDOOR MAIN PBA(DB93-10939K) - 18K (cont.)

Parts Code	Design Loc	Parts Description	Spec.	Quantity
2007-000076	R904	R-CHIP	330ohm,5% ,1/10W,TP,1608	1
2007-000077	R106	R-CHIP	470ohm,5% ,1/10W,TP,1608	1
2007-000077	R219	R-CHIP	470ohm,5% ,1/10W,TP,1608	1
2007-000077	R220	R-CHIP	470ohm,5% ,1/10W,TP,1608	1
2007-000078	R201	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R202	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R203	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R204	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R205	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R206	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R209	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R211	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R303	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R307	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R308	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R516	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R520	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000080	R408	R-CHIP	2Kohm,5% ,1/10W,TP,1608	1
2007-000080	R607	R-CHIP	2Kohm,5% ,1/10W,TP,1608	1
2007-000082	R518	R-CHIP	3.3Kohm,5% ,1/10W,TP,1608	1
2007-000082	R519	R-CHIP	3.3Kohm,5% ,1/10W,TP,1608	1
2007-000082	R802	R-CHIP	3.3Kohm,5% ,1/10W,TP,1608	1
2007-000084	R104	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R221	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R222	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R223	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R224	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R225	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R227	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R407	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R512	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R513	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R660	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R903	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000087	R902	R-CHIP	6.8Kohm,5% ,1/10W,TP,1608	1
2007-000090	R105	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R213	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R215	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R217	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R218	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R301	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R302	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R304	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R305	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R309	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R311	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R312	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R701	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R702	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R901	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000093	R214	R-CHIP	20Kohm,5% ,1/10W,TP,1608	1
2007-000093	R216	R-CHIP	20Kohm,5% ,1/10W,TP,1608	1
2007-000093	R230	R-CHIP	20Kohm,5% ,1/10W,TP,1608	1
2007-000097	R521	R-CHIP	47Kohm,5% ,1/10W,TP,1608	1
2007-000106	R207	R-CHIP	220Kohm,5% ,1/10W,TP,1608	1
2007-000109	R229	R-CHIP	1Mohm,5% ,1/10W,TP,1608	1
2007-000109	R515	R-CHIP	1Mohm,5% ,1/10W,TP,1608	1
2007-000116	R306	R-CHIP	120ohm,5% ,1/10W,TP,1608	1
2007-000116	R514	R-CHIP	120ohm,5% ,1/10W,TP,1608	1
2007-000263	R604	R-CHIP	1.82Kohm,1% ,1/8W,TP,2012	1
2007-000263	R606	R-CHIP	1.82Kohm,1% ,1/8W,TP,2012	1
2007-000455	R501	R-CHIP	18Kohm,1% ,1/10W,TP,1608	1
2007-000455	R504	R-CHIP	18Kohm,1% ,1/10W,TP,1608	1

OUTDOOR MAIN PBA(DB93-10939K) - 18K (cont.)

Parts Code	Design Loc	Parts Description	Spec.	Quantity
2007-000476	R102	R-CHIP	1Mohm,1% ,1/4W,TP,3216	1
2007-000476	R103	R-CHIP	1Mohm,1% ,1/4W,TP,3216	1
2007-000476	R113	R-CHIP	1Mohm,1% ,1/4W,TP,3216	1
2007-000536	R109	R-CHIP	200ohm,1% ,1/10W,TP,1608	1
2007-000614	R453	R-CHIP	24Kohm,1% ,1/10W,TP,1608	1
2007-000614	R456	R-CHIP	24Kohm,1% ,1/10W,TP,1608	1
2007-000614	R462	R-CHIP	24Kohm,1% ,1/10W,TP,1608	1
2007-000614	R502	R-CHIP	24Kohm,1% ,1/10W,TP,1608	1
2007-000614	R503	R-CHIP	24Kohm,1% ,1/10W,TP,1608	1
2007-000614	R663	R-CHIP	24Kohm,1% ,1/10W,TP,1608	1
2007-000651	R463	R-CHIP	27Kohm,1% ,1/10W,TP,1608	1
2007-000651	R466	R-CHIP	27Kohm,1% ,1/10W,TP,1608	1
2007-000669	R464	R-CHIP	2Kohm,1% ,1/10W,TP,1608	1
2007-000669	R465	R-CHIP	2Kohm,1% ,1/10W,TP,1608	1
2007-000669	R608	R-CHIP	2Kohm,1% ,1/10W,TP,1608	1
2007-000669	R651	R-CHIP	2Kohm,1% ,1/10W,TP,1608	1
2007-000683	R452	R-CHIP	3.3Kohm,1% ,1/10W,TP,1608	1
2007-000683	R457	R-CHIP	3.3Kohm,1% ,1/10W,TP,1608	1
2007-000683	R460	R-CHIP	3.3Kohm,1% ,1/10W,TP,1608	1
2007-000708	R655	R-CHIP	3.9Kohm,1% ,1/10W,TP,1608	1
2007-000766	R226	R-CHIP	330ohm,5% ,1/8W,TP,2012	1
2007-000857	R804	R-CHIP	4.3Kohm,1% ,1/10W,TP,1608	1
2007-000872	R509	R-CHIP	4.7Kohm,5% ,1/8W,TP,2012	1
2007-000872	R510	R-CHIP	4.7Kohm,5% ,1/8W,TP,2012	1
2007-000872	R511	R-CHIP	4.7Kohm,5% ,1/8W,TP,2012	1
2007-000924	R005	R-CHIP	470Kohm,1% ,1/4W,TP,3216	1
2007-000924	R006	R-CHIP	470Kohm,1% ,1/4W,TP,3216	1
2007-000924	R007	R-CHIP	470Kohm,1% ,1/4W,TP,3216	1
2007-000924	R657	R-CHIP	470Kohm,1% ,1/4W,TP,3216	1
2007-000924	R658	R-CHIP	470Kohm,1% ,1/4W,TP,3216	1
2007-000924	R659	R-CHIP	470Kohm,1% ,1/4W,TP,3216	1
2007-000082		R-CHIP	3.3Kohm,5% ,1/10W,TP,1608	1
2007-000929	R110	R-CHIP	470ohm,1% ,1/10W,TP,1608	1
2007-000939	R111	R-CHIP	47Kohm,1% ,1/10W,TP,1608	1
2007-000939	R652	R-CHIP	47Kohm,1% ,1/10W,TP,1608	1
2007-000950	R118	R-CHIP	47ohm,5% ,1/4W,TP,3216	1
2007-000962	R107	R-CHIP	5.1Kohm,1% ,1/10W,TP,1608	1
2007-000965	R523	R-CHIP	5.1Kohm,5% ,1/10W,TP,1608	1
2007-000965	R524	R-CHIP	5.1Kohm,5% ,1/10W,TP,1608	1
2007-000965	R525	R-CHIP	5.1Kohm,5% ,1/10W,TP,1608	1
2007-000965	R526	R-CHIP	5.1Kohm,5% ,1/10W,TP,1608	1
2007-000979	R654	R-CHIP	5.6Kohm,1% ,1/10W,TP,1608	1
2007-001067	R656	R-CHIP	6.8Kohm,1% ,1/8W,TP,2012	1
2007-001068	R416	R-CHIP	6.8Kohm,1% ,1/10W,TP,1608	1
2007-001074	R114	R-CHIP	6.8ohm,5% ,1/8W,TP,2012	1
2007-001174	R004	R-CHIP	8.25Kohm,1% ,1/4W,TP,3216	1
2007-001175	R806	R-CHIP	8.2Kohm,1% ,1/10W,TP,1608	1
2007-002637	R601	R-CHIP	60.4Kohm,1% ,1/4W,TP,3216	1
2007-002637	R602	R-CHIP	60.4Kohm,1% ,1/4W,TP,3216	1
2007-002637	R603	R-CHIP	60.4Kohm,1% ,1/4W,TP,3216	1
2007-002637	R605	R-CHIP	60.4Kohm,1% ,1/4W,TP,3216	1
2007-002637	R609	R-CHIP	60.4Kohm,1% ,1/4W,TP,3216	1
2007-002637	R610	R-CHIP	60.4Kohm,1% ,1/4W,TP,3216	1
2007-007225	R108	R-CHIP	1.62Kohm,1% ,1/10W,TP,1608	1
2007-007225	R417	R-CHIP	1.62Kohm,1% ,1/10W,TP,1608	1
2007-007225	R454	R-CHIP	1.62Kohm,1% ,1/10W,TP,1608	1
2007-007225	R455	R-CHIP	1.62Kohm,1% ,1/10W,TP,1608	1
2007-007225	R461	R-CHIP	1.62Kohm,1% ,1/10W,TP,1608	1
2007-007385	R116	R-CHIP	1.2Mohm,1% ,1/4w,TP,3216	1
2007-008261	R001	R-CHIP	150Kohm,1% ,1/2W,TP,5025	1
2007-008261	R002	R-CHIP	150Kohm,1% ,1/2W,TP,5025	1
2007-008261	R003	R-CHIP	150Kohm,1% ,1/2W,TP,5025	1
2007-010245	R807	R-CHIP	0.01ohm,1% ,2W,TP,6432	1
2007-010245	R808	R-CHIP	0.01ohm,1% ,2W,TP,6432	1

OUTDOOR MAIN PBA(DB93-10939K) - 18K (cont.)

Parts Code	Design Loc	Parts Description	Spec.	Quantity
2007-010245	R809	R-CHIP	0.01ohm,1% ,2W,TP,6432	1
2203-000189	C523	C-CER,CHIP	100nF,+80-20% ,25V,Y5V,TP,1608	1
2203-000236	C802	C-CER,CHIP	0.1nF,5% ,50V,C0G,TP,1608	1
2203-000257	C213	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C216	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C301	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C416	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C521	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C524	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C525	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C526	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C527	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C601	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C602	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C603	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C605	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C651	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C653	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C804	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C805	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C904	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000440	C201	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C202	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C203	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C204	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C401	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C402	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C403	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C404	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C405	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C406	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C407	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C409	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C654	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000783	C454	C-CER,CHIP	0.33nF,5% ,50V,C0G,TP,1608	1
2203-000783	C455	C-CER,CHIP	0.33nF,5% ,50V,C0G,TP,1608	1
2203-000799	C408	C-CER,CHIP	33nF,10% ,16V,X7R,TP,1608,0.8T	1
2203-002002	C218	C-CER,CHIP	0.033nF,5% ,50V,NP0,TP,1608	1
2203-002002	C219	C-CER,CHIP	0.033nF,5% ,50V,NP0,TP,1608	1
2203-002002	C220	C-CER,CHIP	0.033nF,5% ,50V,NP0,TP,1608	1
2203-002002	C221	C-CER,CHIP	0.033nF,5% ,50V,NP0,TP,1608	1
2203-002002	C222	C-CER,CHIP	0.033nF,5% ,50V,NP0,TP,1608	1
2203-002002	C223	C-CER,CHIP	0.033nF,5% ,50V,NP0,TP,1608	1
2203-002002	C451	C-CER,CHIP	0.033nF,5% ,50V,NP0,TP,1608	1
2203-002002	C452	C-CER,CHIP	0.033nF,5% ,50V,NP0,TP,1608	1
2203-002002	C453	C-CER,CHIP	0.033nF,5% ,50V,NP0,TP,1608	1
2203-005249	C103	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C104	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C105	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C106	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C107	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C108	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C109	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C110	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C113	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C208	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C209	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C210	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C211	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C212	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C214	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C215	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C226	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C227	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1

OUTDOOR MAIN PBA(DB93-10939K) - 18K (cont.)

Parts Code	Design Loc	Parts Description	Spec.	Quantity
2203-005249	C302	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C303	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C304	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C305	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C306	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C307	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C312	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C313	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C314	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C315	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C411	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C412	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C413	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C415	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C456	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C457	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C501	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C502	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C503	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C504	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C505	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C506	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C507	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C508	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C510	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C511	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C512	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C513	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C514	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C515	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C516	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C518	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C519	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C528	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C529	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C532	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C604	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C652	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C803	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C903	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-006104	C316	C-CER,CHIP	1000nF,10% ,50V,X7R,TP,3225,2.5T	1
2203-006104	C902	C-CER,CHIP	1000nF,10% ,50V,X7R,TP,3225,2.5T	1
2203-006333	C317	C-CER,CHIP	10000nF,20% ,16V,X5R,TP,3216	1
2203-006333	C318	C-CER,CHIP	10000nF,20% ,16V,X5R,TP,3216	1
2203-006333	C530	C-CER,CHIP	10000nF,20% ,16V,X5R,TP,3216	1
2203-006333	CE501	C-CER,CHIP	10000nF,20% ,16V,X5R,TP,3216	1
2203-006333	CE502	C-CER,CHIP	10000nF,20% ,16V,X5R,TP,3216	1
2203-006333	CE503	C-CER,CHIP	10000nF,20% ,16V,X5R,TP,3216	1
2203-006348	C205	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1608,0.8T	1
2203-006348	C206	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1608,0.8T	1
2203-006348	C207	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1608,0.8T	1
2203-006348	C217	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1608,0.8T	1
2203-006348	C410	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1608,0.8T	1
2203-006348	C509	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1608,0.8T	1
2203-006348	C517	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1608,0.8T	1
2203-006348	C520	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1608,0.8T	1
2203-006348	C531	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1608,0.8T	1
2203-006348	C801	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1608,0.8T	1
2402-001144	CE201	C-AL,SMD	68uF,20% ,25V,LZ,TP,6.3X5.8mm	1
2402-001144	CE402	C-AL,SMD	68uF,20% ,25V,LZ,TP,6.3X5.8mm	1
2402-001144	CE403	C-AL,SMD	68uF,20% ,25V,LZ,TP,6.3X5.8mm	1
2402-001144	CE404	C-AL,SMD	68uF,20% ,25V,LZ,TP,6.3X5.8mm	1
2402-001144	CE452	C-AL,SMD	68uF,20% ,25V,LZ,TP,6.3X5.8mm	1
2402-001268	CE401	C-AL,SMD	100uF,20% ,25V,WT,TP,8x6.3mm	1

OUTDOOR MAIN PBA(DB93-10939K) - 18K (cont.)

Parts Code	Design Loc	Parts Description	Spec.	□uantity
2402-001268	CE405	C-AL,SMD	100uF,20□ ,25V,WT,TP,8x6.3mm	1
2402-001268	CE801	C-AL,SMD	100uF,20□ ,25V,WT,TP,8x6.3mm	1
2402-001268	CE805	C-AL,SMD	100uF,20□ ,25V,WT,TP,8x6.3mm	1
2703-003768	L101	INDUCTOR-SMD	330uH,20□ ,6060,2.736ohm,270mA,Wirewound	1
2802-001165	X501	RESONATOR-CERAMIC	4MHz,0.5□ ,TP,4.5x2.0x1.15mm	1
2802-001211	X201	RESONATOR-CERAMIC	8MHZ,0.1□ ,TP,3.2X1.3X0.9 MM	1
DB13-00003A	Q901	IC DRIVER GATE	-,SOT-23,-,-,1P,1P,0.2mm,2.93x1.3mm	1
DB41-01023A	PCB	PCB MAIN-INVERTER	VENICE Project,FR-4,2,T1.6,240x195,1,INVERTER OUT,600V	1
DB91-01387A	IC201	ASSY MICOM	MICHELANGELO OUTDOOR INV MICOM,STM-111D-OA, LM3S817, 48LQFP, ROM 64KB	1
DB09-00591A	-	IC MICOM	LM3S817,48,DC3V,50 MHz,LQFP,LQFP,LQFP,-40 □ 85,64KB,LQFP	1
DB91-01552A	IC501	ASSY MICOM	13R A3050 RAC PF3 Outdoor Main Micom,STM-1321-OA, S3F4A1HKZZ-TX8H, 100TQFP, ROM 512KB	1
DB09-00535B	-	IC MICOM	S3F4A1HKZZ-TX8H,100P,DC5V,12 MHz,QFP,16 Bit,16 Bit,QFP,QFP,16 Bit,-40□+105,512K	1

6-6 OUTDOOR MAIN PBA(DB93-12326E) - 24K

Parts Code	Design Loc	Parts Description	Spec.	Quantity
0201-001982	ADHESIVE-SIL	ADHESIVE-SIL	TSE3854DS-W,White,2.2,MIL-A-46146B,UL94V-0	0.005
0202-001338	SOLDER BAR	SOLDER-BAR	LeeD-free Solder BAR,W20L350H8,99.3Sn/0.7Cu/0.01P	10
0202-001608	SOLDER WIRE	SOLDER-WIRE FLUX	LFC7-107,D0.8,99.3Sn/0.7Cu/0.01P,Flux3-4	2
0204-003174	SOLVENT-	SOLVENT	S-E70,R-OH,100 ,0.790	2
0204-005180	FLUX	FLUX	ILF-714,MIXTURE, 99.5 ,18L,(0.823) / (14)	1
1203-000002	IC102	IC-POSI.AD UST REG.	431,TO-92,3P,-,PLASTIC,2.44/2.58V,775MV,0TO+70C,100MA,-,ST,-	1
1203-006612	IC101	IC-PWM CONTROLLER	TOP264VG,DIP,12P,10.16x10.46mm,PLASTIC,TP	1
1404-001274	NTC01	THERMISTOR-NTC	22ohm,1.4A,3100K,9.5mW/C,-,7.0,-	1
2802-001179	X201	RESONATOR-CERAMIC	4MHZ,0.5 ,TP,8x3x5.5mm	1
3404-000165	K1	SWITCH-TACT	12V,50mA,160gf,6x6x5,SPST	1
3404-000165	K2	SWITCH-TACT	12V,50mA,160gf,6x6x5,SPST	1
3404-000165	K3	SWITCH-TACT	12V,50mA,160gf,6x6x5,SPST	1
3404-000165	K4	SWITCH-TACT	12V,50mA,160gf,6x6x5,SPST	1
3407-000121	SW02	SWITCH-DIP	24V,300mA,SLIDE,STANDARD	1
3501-001163	RY72	RELAY-MINIATURE	12V,200mW,5000mA,1FormA,10ms,5ms	1
3501-001163	RY74	RELAY-MINIATURE	12V,200mW,5000mA,1FormA,10ms,5ms	1
3501-001163	RY75	RELAY-MINIATURE	12V,200mW,5000mA,1FormA,10ms,5ms	1
3601-000263	FUSE02	FUSE-CARTRIDGE	250V,3.15A,TIME-LAG,GLASS,5x20mm	1
3602-001012	F101	FUSE-BLOCK	500V,-,100MOhm	1
3704-001601	IC83	SOCKET-IC	8P,SN,2.54mm	1
3711-000015	CN44	HEADER-BOARD TO CABLE	BOX,2P,1R,2.5MM,STRAIGHT,SN,WHT	1
3711-000024	CN45	HEADER-BOARD TO CABLE	BOX,3P,1R,2.5MM,STRAIGHT,SN,WHT	1
3711-000176	CN12	HEADER-BOARD TO CABLE	1WALL,2P,1R,3.96mm,STRAIGHT,SN,BLU	1
3711-000177	CN31	HEADER-BOARD TO CABLE	1WALL,2P,1R,3.96MM,STRAIGHT,SN,RED	1
3711-000203	CN11	HEADER-BOARD TO CABLE	1WALL,2P/3P,1R,7.92mm,STRAIGHT,SN,WHT	1
3711-000997	CN81	CONNECTOR-HEADER	BOX,5P,1R,2.5mm,STRAIGHT,SN,BLU	1
3711-000999	CN901	HEADER-BOARD TO CABLE	BOX,5P,1R,2.5mm,STRAIGHT,SN,WHT	1
3711-001038	CN39	HEADER-BOARD TO CABLE	BOX,6P,1R,2.5mm,STRAIGHT,SN,WHT	1
3711-001084	CN43	HEADER-BOARD TO CABLE	BOX,8P,1R,2.5MM,STRAIGHT,SN,WHT	1
3711-003406	CN75	HEADER-BOARD TO CABLE	1WALL,2P,1R,7.92MM,STRAIGHT,SN,YEL	1
3711-003407	CN74	HEADER-BOARD TO CABLE	1WALL,2P,1R,7.92MM,STRAIGHT,SN,RED	1
3711-003873	CN35	HEADER-BOARD TO CABLE	BOX,7P,1R,2mm,STRAIGHT,SN,WHT	1
3711-005096	CN32	HEADER-BOARD TO CABLE	BOX,5P,1R,2MM,STRAIGHT,SN,BLK	1
3711-005716	CN37	HEADER-BOARD TO CABLE	BOX,10P,1R,2mm,STRAIGHT,SN,BLK	1
3711-007422	CN33	HEADER-BOARD TO BOARD	7P,1R,2mm,STRAIGHT,BRASS,BLK	1
3712-001047	EARTH	CONNECTOR-TERMINAL	TAB,MALE,N,0.5/4.75mm	1
DB07-00054A	DP51	LED DISPLAY	SSD-A3202GS-A13,LED DISPLAY,2 DIGIT,16 SEGMENT,2 DIGIT,16.6x16x13mm,GREEN,50mW,9	1
DB07-00054A	DP52	LED DISPLAY	SSD-A3202GS-A13,LED DISPLAY,2 DIGIT,16 SEGMENT,2 DIGIT,16.6x16x13mm,GREEN,50mW,9	1
DB26-00122A	PT01	TRANS SWITCHING	EE2525,RC100PHXEA,GLOBAL 4WAY,310V,200 400V,PL-7,PM-7,5V,12V,ER25 25 V10,50HZ,1.56mH,MULTI OUTPUT	1
DB27-00082A	COIL01	COIL CHOKE	CV305400S RC100PHXEA,GLOBAL 4WAY,40mH,+50 -30 ,706mohm,0.5A,13 7 5,16 18.5 10,3.4mm 8.4mm,1.2 mm,PAD,-25 +105	1
DB94-04162E	-	ASSY PCB AUTO	OUTDOOR,A3050,Y,5V,12V,OLD PF#4,DB93-12326E	1
2003-000855	R110	R-METAL OXIDE(S)	47Kohm,5 ,3W,AA,TP,5.6x16mm	1
2201-000322	C103	C-CERAMIC,DISC	2.2nF,10 ,2000V,Y5P,TP,13x5mm,10mm	1
2201-000551	C107	C-CERAMIC,DISC	0.47nF,10 ,1000V,Y5P,6.3x5mm,5mm	1
2201-000983	C104	C-CERAMIC,DISC	1nF,10 ,2000V,Y5P,TP,9x5mm,7.5mm	1
2201-000987	C116	C-CERAMIC,DISC	2.2nF,20 ,400V,Y5U,TP,12.5x6mm,10mm	1
2201-000987	C117	C-CERAMIC,DISC	2.2nF,20 ,400V,Y5U,TP,12.5x6mm,10mm	1
2301-001220	YC01	C-FILM,LEAD-PPF	100nF,10 ,275V,BK,18x6x12mm	1
2301-001220	YC02	C-FILM,LEAD-PPF	100nF,10 ,275V,BK,18x6x12mm	1
2401-000481	C118	C-AL	10uF,20 ,50V,WT,TP,5x11,5	1
2401-001103	C111	C-AL	330uF,20 ,16V,WT,TP,8x11.5mm,5	1
2401-001103	C112	C-AL	330uF,20 ,16V,WT,TP,8x11.5mm,5	1
2401-001838	C108	C-AL	470uF,20 ,25V,WT,TP,10x16,5mm	1
2401-001838	C109	C-AL	470uF,20 ,25V,WT,TP,10x16,5mm	1
2401-002438	C106	C-AL	47uF,20 ,50V,WT,TP,6.3x11,5mm	1
2401-003645	C115	C-AL	1UF,20 ,50V,WT,TP,4X5MM,5	1

OUTDOOR MAIN PBA(DB93-12326E) - 24K (cont.)

Parts Code	Design Loc	Parts Description	Spec.	Quantity
2401-003861	C101	C-AL	68UF,20%,400V,WT,TP,18X25MM,7.5	1
2401-003861	C102	C-AL	68UF,20%,400V,WT,TP,18X25MM,7.5	1
3601-001308	F102	FUSE	250V,1.6A,TIME-LAG,PLASTIC,8.4x7.6mm	1
DB94-04162F	-	ASSY PCB SMD	OUTDOOR,A3050,Y,5V,12V,OLD PF#4,DB93-12326E	1
0202-001459	SOLDER CREAM	SOLDER-CREAM	S3X58-M405,D20~38um,96.5Sn/3Ag/0.5Cu,FLUX 5%	10
0401-001099	D105	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D201	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D202	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D203	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D204	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D209	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D210	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D211	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D212	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D213	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D214	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D391	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D392	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D420	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D421	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0402-001192	D104	DIODE-RECTIFIER	ES2D,200V,2A,SMB,TP	1
0402-001298	BD101	DIODE-BRIDGE	DF06S,600V,1A,SMD-4,TP	1
0402-001427	D102	DIODE-RECTIFIER	ES1D,200V,1A,DO-214AC,TP	1
0402-001427	D103	DIODE-RECTIFIER	ES1D,200V,1A,DO-214AC,TP	1
0402-001429	D101	DIODE-RECTIFIER	US1J,600V,1A,DO-214AC,TP	1
0406-001204	CD31	DIODE-TVS	SMBJ5.0CA,6.4/-/7.25V,600W,SMB	1
0406-001204	CD32	DIODE-TVS	SMBJ5.0CA,6.4/-/7.25V,600W,SMB	1
0406-001204	CD33	DIODE-TVS	SMBJ5.0CA,6.4/-/7.25V,600W,SMB	1
0504-000001	Q501	TR-DIGITAL	DTA114EKA,PNP,200mW,10K/10K,SOT-23,TP	1
0504-000001	Q502	TR-DIGITAL	DTA114EKA,PNP,200mW,10K/10K,SOT-23,TP	1
0504-000001	Q503	TR-DIGITAL	DTA114EKA,PNP,200mW,10K/10K,SOT-23,TP	1
0504-000001	Q504	TR-DIGITAL	DTA114EKA,PNP,200mW,10K/10K,SOT-23,TP	1
0504-000127	Q103	TR-DIGITAL	FJV3102R,NPN,200mW,10K/10Kohm,SOT-23,TP	1
0506-000175	IC51	TR-ARRAY	2003,NPN,7,1W,SOP-16,ST,1000	1
0506-000175	IC52	TR-ARRAY	2003,NPN,7,1W,SOP-16,ST,1000	1
0506-000175	IC71	TR-ARRAY	2003,NPN,7,1W,SOP-16,ST,1000	1
0506-000175	IC81	TR-ARRAY	2003,NPN,7,1W,SOP-16,ST,1000	1
0601-001816	LD74	LED	SMD,Y-GRN,1.6x0.8x0.55mm,570nm,1.6x0.8x0.55mm	1
0601-001816	LD75	LED	SMD,Y-GRN,1.6x0.8x0.55mm,570nm,1.6x0.8x0.55mm	1
0601-002345	LD01	LED	SMD,RED,1.6x0.8x0.55mm,660nm,1.6x0.8x0.55mm	1
0604-001172	PC01	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1
0801-000393	IC32	IC-CMOS LOGIC	74HC86,OR GATE,SOP,14P,150MIL,QUAD,ST,-,2.0/6.0V,0.26V,-40to+85C,180mW,4.2V,1uA,	1
1006-001325	IC31	IC-BUS TRANSCEIVER	ISL81487LIBZ,SO,8P,4.9x3.8 mm,SINGLE,ST,PLASTIC,5V,-40to+85C,520mW,1,1,1.5/5.0V	1
2007-000074	R202	R-CHIP	100ohm,5%,1/10W,TP,1608	1
2007-000076	R203	R-CHIP	330ohm,5%,1/10W,TP,1608	1
2007-000076	R309	R-CHIP	330ohm,5%,1/10W,TP,1608	1
2007-000076	R310	R-CHIP	330ohm,5%,1/10W,TP,1608	1
2007-000076	R411	R-CHIP	330ohm,5%,1/10W,TP,1608	1
2007-000076	R413	R-CHIP	330ohm,5%,1/10W,TP,1608	1
2007-000076	R415	R-CHIP	330ohm,5%,1/10W,TP,1608	1
2007-000076	R417	R-CHIP	330ohm,5%,1/10W,TP,1608	1
2007-000076	R902	R-CHIP	330ohm,5%,1/10W,TP,1608	1
2007-000076	R904	R-CHIP	330ohm,5%,1/10W,TP,1608	1
2007-000076	R906	R-CHIP	330ohm,5%,1/10W,TP,1608	1
2007-000078	R121	R-CHIP	1Kohm,5%,1/10W,TP,1608	1
2007-000078	R302	R-CHIP	1Kohm,5%,1/10W,TP,1608	1
2007-000078	R303	R-CHIP	1Kohm,5%,1/10W,TP,1608	1
2007-000078	R501	R-CHIP	1Kohm,5%,1/10W,TP,1608	1
2007-000078	R502	R-CHIP	1Kohm,5%,1/10W,TP,1608	1
2007-000078	R503	R-CHIP	1Kohm,5%,1/10W,TP,1608	1
2007-000078	R504	R-CHIP	1Kohm,5%,1/10W,TP,1608	1

OUTDOOR MAIN PBA(DB93-12326E) - 24K (cont.)

Parts Code	Design Loc	Parts Description	Spec.	Quantity
2007-000078	R505	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R506	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R507	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000082	R704	R-CHIP	3.3Kohm,5% ,1/10W,TP,1608	1
2007-000082	R705	R-CHIP	3.3Kohm,5% ,1/10W,TP,1608	1
2007-000084	R901	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R903	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R905	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000090	R304	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R305	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R306	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R307	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R308	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R311	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R312	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R313	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R314	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R391	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R512	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R513	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R514	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R515	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000116	R201	R-CHIP	120ohm,5% ,1/10W,TP,1608	1
2007-000116	R301	R-CHIP	120ohm,5% ,1/10W,TP,1608	1
2007-000134	R100	R-CHIP	33Kohm,5% ,1/10W,TP,1608	1
2007-000238	R221	R-CHIP	1.5Kohm,1% ,1/8W,TP,2012	1
2007-000297	R118	R-CHIP	10Kohm,1% ,1/8W,TP,2012	1
2007-000297	R119	R-CHIP	10Kohm,1% ,1/8W,TP,2012	1
2007-000409	R111	R-CHIP	15Kohm,5% ,1/8W,TP,2012	1
2007-000441	R108	R-CHIP	180Kohm,1% ,1/8W,TP,2012	1
2007-000455	R412	R-CHIP	18Kohm,1% ,1/10W,TP,1608	1
2007-000455	R414	R-CHIP	18Kohm,1% ,1/10W,TP,1608	1
2007-000455	R419	R-CHIP	18Kohm,1% ,1/10W,TP,1608	1
2007-000481	R101	R-CHIP	1Mohm,5% ,1/4W,TP,3216	1
2007-000481	R102	R-CHIP	1Mohm,5% ,1/4W,TP,3216	1
2007-000481	R103	R-CHIP	1Mohm,5% ,1/4W,TP,3216	1
2007-000481	R104	R-CHIP	1Mohm,5% ,1/4W,TP,3216	1
2007-000592	R113	R-CHIP	22ohm,1% ,1/4W,TP,3216	1
2007-000614	R416	R-CHIP	24Kohm,1% ,1/10W,TP,1608	1
2007-000614	R418	R-CHIP	24Kohm,1% ,1/10W,TP,1608	1
2007-000683	R117	R-CHIP	3.3Kohm,1% ,1/10W,TP,1608	1
2007-000701	R114	R-CHIP	3.6Kohm,1% ,1/10W,TP,1608	1
2007-000869	R340	R-CHIP	4.7Kohm,1% ,1/10W,TP,1608	1
2007-000941	R109	R-CHIP	47Kohm,5% ,1/8W,TP,2012	1
2007-000941	R120	R-CHIP	47Kohm,5% ,1/8W,TP,2012	1
2007-001131	R115	R-CHIP	68ohm,1% ,1/10W,TP,1608	1
2007-007385	R105	R-CHIP	1.2Mohm,1% ,1/4w,TP,3216	1
2007-007385	R106	R-CHIP	1.2Mohm,1% ,1/4w,TP,3216	1
2007-007385	R107	R-CHIP	1.2Mohm,1% ,1/4w,TP,3216	1
2007-010635	R112	R-CHIP	6.8ohm,1% ,1/10,TP,1608	1
2203-000257	C301	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C302	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C303	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C512	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C513	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C514	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C515	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000440	C120	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-002304	C203	C-CER,CHIP	10pF,5% ,50V,TH,BK,1608,-	1
2203-005249	C105	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C110	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C113	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C114	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1

OUTDOOR MAIN PBA(DB93-12326E) - 24K (cont.)

Parts Code	Design Loc	Parts Description	Spec.	Quantity
2203-005249	C119	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C202	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C204	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C205	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C206	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C207	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C208	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C209	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C211	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C212	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C213	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C214	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C216	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C217	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C304	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C305	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C311	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C312	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C403	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C404	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C405	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C406	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C501	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C502	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C701	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C801	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C901	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C902	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C903	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-006348	C201	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1608,0.8T	1
2203-006348	C210	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1608,0.8T	1
2203-006348	C221	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1608,0.8T	1
2703-002297	L101	INDUCTOR-SMD	4.7uH,20% ,6060,.053Ohm,2400mA,Wirewound	1
2703-002297	L102	INDUCTOR-SMD	4.7uH,20% ,6060,.053Ohm,2400mA,Wirewound	1
DB41-01081B	PCB	PCB	FR-4,2	1
DB91-01553A	-	ASSY MICOM	13R A3050 RAC PF4 Outdoor Main Micom,STM-1322-OA, S3F4A1HKZZ-TX8H, 100TQFP, ROM 512KB	1
DB09-00535B	-	IC MICOM	S3F4A1HKZZ-TX8H,100P,DC5V,12 MHz,QFP,16 Bit,16 Bit,QFP,QFP,16 Bit,-40~+105,512K	1

6-7 OUTDOOR MAIN PBA(DB93-11112E) - 24K

Parts Code	Design Loc	Parts Description	Spec.	Quantity
DB93-11360C		ASSY PCB MANUAL	RC100DHXEA,ASSY PCB MANUAL,N	1
0201-001982	ADHESIVE-SILICON	ADHESIVE-SIL	TSE3854DS-W,White,2.2,MIL-A-46146B,UL94V-0	0.02
0202-001338	SOLDER BAR	SOLDER-BAR	LeeD-free Solder BAR,W20L350H8,99.3Sn/0.7Cu/0.01P	12.4
0202-001459	SOLDER CREAM	SOLDER-CREAM	S3X58-M405,D20□38um,96.5Sn/3Ag/0.5Cu,FLUX 5□	3.8
0202-001608	SOLDER WIRE	SOLDER-WIRE FLUX	LFC7-107,D0.8,99.3Sn/0.7Cu/0.01P,Flux3-4□	3.2
0204-005180	FLUX	FLUX	ILF-714,MIXTURE,□99.5□ ,18L,(0.823) / (14□)	10
0204-005225	SOLVENT	SOLVENT	IT-700,R-OH,100□ ,0.786	10
1203-002735	IC113	IC-POSI.FIXED REG.	KIA7815API,TO-220IS,3P,10.3x15.3mm,PLASTIC,15V,2W,-30to+150,1A,-,ST	1
1203-003527	IC101	IC-PWM CONTROLLER	TOP243,DIP,7P,9.83x6.6mm,PLASTIC,-0.3/700V,25W,-40to+150,1.44A,TP	1
1404-001498	PTC01	THERMISTOR-PTC	40ohm,25□ ,290Vac,7A,TR	1
2301-002101	C132	C-FILM,LEAD	470nF,10□ ,630V,BK,8.5x18.0x26.0	1
2301-002101	C701	C-FILM,LEAD	470nF,10□ ,630V,BK,8.5x18.0x26.0	1
2401-004279	C141	C-AL	470uF,20□ ,450V,WT,BK,35x50mm,14.2mm	1
2401-004279	C142	C-AL	470uF,20□ ,450V,WT,BK,35x50mm,14.2mm	1
2401-004279	C143	C-AL	470uF,20□ ,450V,WT,BK,35x50mm,14.2mm	1
2401-004279	C144	C-AL	470uF,20□ ,450V,WT,BK,35x50mm,14.2mm	1
2602-000074	CT71	TRANS-PULSE	80mH,19.56x14.48x19.05	1
2602-000074	CT72	TRANS-PULSE	80mH,19.56x14.48x19.05	1
3501-001163	RY11	RELAY-MINIATURE	12V,200mW,5000mA,1FormA,10ms,5ms	1
3501-001411	RY12	RELAY-POWER	12V,30000mA,2FormA	1
3601-000263	F901-1	FUSE-CARTRIDGE	250V,3.15A,TIME-LAG,GLASS,5x20mm	1
3602-001012	F901	FUSE-BLOCK	500V,-,100MOhm	1
3711-000296	CN90	HEADER-BOARD TO CABLE	1WALL,6P,1R,3.96MM,STRAIGHT,SN,WHT	1
3711-001038	CN31	HEADER-BOARD TO CABLE	BOX,6P,1R,2.5mm,STRAIGHT,SN,WHT	1
3711-003843	CN21	HEADER-BOARD TO CABLE	BOX,8P,1R,2mm,STRAIGHT,SN,WHT	1
3711-007276	CN71	CONNECTOR-HEADER	3P,1R,10mm,STRAIGHT,AU,BLK	1
3711-007706	CN22	HEADER-BOARD TO CABLE	BOX,10P,1R,2mm,STRAIGHT,SN,RED	1
3712-001139	REACTOR-A1	CONNECTOR-TERMINAL	TAB,MALE,6.35x0.8mm	1
3712-001139	REACTOR-A2	CONNECTOR-TERMINAL	TAB,MALE,6.35x0.8mm	1
3712-001139	REACTOR-B1	CONNECTOR-TERMINAL	TAB,MALE,6.35x0.8mm	1
3712-001139	REACTOR-B2	CONNECTOR-TERMINAL	TAB,MALE,6.35x0.8mm	1
4719-002485	IPM	POWER MODULE	Smart Power Module,FSBB30CH60C,600V,30A,106W,20kHz	1
4719-002496	PFCM	POWER MODULE	SPM for Interleaved PFC,600V-30A single-phase	1
DB26-00123A	ST11	TRANS SWITCHING	EE2218,RC100PHXEA,GLOBAL 4WAY,310V,200□400V,PL-7,PM-7,8V,13V,15V,17V,EE22□18 V10,50HZ,700uH,MULTI OUTPUT	1
DB93-10870A	ASSY CW POWER-LN	ASSY CONNECTOR WIRE-POWER	RC160RHXH1	1
DB93-11370C		ASSY PCB AUTO	RC100DHXEA,,AUTO,N	1
0402-000012	D102	DIODE-RECTIFIER	UF4007,1000V,1A,DO-41,TP	1
0406-001434	D704	DIODE-TVS	P6KE18A,200,185,215,DO-15	1
0406-001434	D801	DIODE-TVS	P6KE18A,200,185,215,DO-15	1
2003-000855	R101	R-METAL OXIDE(S)	47Kohm,5□ ,3W,AA,TP,5.6x16mm	1
2201-000154	C101	C-CERAMIC,DISC	10nF,+80-20□ ,2000V,Y5P,20x5mm,7.5mm	1
2201-000322	C102	C-CERAMIC,DISC	2.2nF,10□ ,2000V,Y5P,TP,13x5mm,10mm	1
2201-000551	C103	C-CERAMIC,DISC	0.47nF,10□ ,1000V,Y5P,6.3x5mm,5mm	1
2201-000551	C110	C-CERAMIC,DISC	0.47nF,10□ ,1000V,Y5P,6.3x5mm,5mm	1
2201-000551	C122	C-CERAMIC,DISC	0.47nF,10□ ,1000V,Y5P,6.3x5mm,5mm	1
2201-000551	C127	C-CERAMIC,DISC	0.47nF,10□ ,1000V,Y5P,6.3x5mm,5mm	1
2201-000551	C719	C-CERAMIC,DISC	0.47nF,10□ ,1000V,Y5P,6.3x5mm,5mm	1
2201-000551	C720	C-CERAMIC,DISC	0.47nF,10□ ,1000V,Y5P,6.3x5mm,5mm	1
2301-002101	C725	C-FILM,LEAD	470nF,10□ ,630V,BK,8.5x18.0x26.0	1
2401-000287	C722	C-AL	100uF,20□ ,16V,WT,TP,6.3x11,5	1
2401-000481	C104	C-AL	10uF,20□ ,50V,WT,TP,5x11,5	1
2401-000481	C106	C-AL	10uF,20□ ,50V,WT,TP,5x11,5	1
2401-000481	C109	C-AL	10uF,20□ ,50V,WT,TP,5x11,5	1
2401-000481	C160	C-AL	10uF,20□ ,50V,WT,TP,5x11,5	1
2401-000481	C161	C-AL	10uF,20□ ,50V,WT,TP,5x11,5	1
2401-000481	C901	C-AL	10uF,20□ ,50V,WT,TP,5x11,5	1

OUTDOOR MAIN PBA(DB93-11112E) - 24K (cont.)

Parts Code	Design Loc	Parts Description	Spec.	Quantity
2401-000880	C708	C-AL	220uF,20% ,50V,WT,TP,10x16mm,5m	1
2401-000880	C801	C-AL	220uF,20% ,50V,WT,TP,10x16mm,5m	1
2401-002438	C114	C-AL	47uF,20% ,50V,WT,TP,6.3x11,5mm	1
2401-003585	C111	C-AL	220uF,20% ,35V,WT,TP,8x11.5mm,5	1
2401-003585	C112	C-AL	220uF,20% ,35V,WT,TP,8x11.5mm,5	1
2401-003585	C116	C-AL	220uF,20% ,35V,WT,TP,8x11.5mm,5	1
2401-003585	C118	C-AL	220uF,20% ,35V,WT,TP,8x11.5mm,5	1
2401-003585	C121	C-AL	220uF,20% ,35V,WT,TP,8x11.5mm,5	1
2401-003585	C123	C-AL	220uF,20% ,35V,WT,TP,8x11.5mm,5	1
2401-003585	C125	C-AL	220uF,20% ,35V,WT,TP,8x11.5mm,5	1
2401-003585	C906	C-AL	220uF,20% ,35V,WT,TP,8x11.5mm,5	1
2401-003736	C713	C-AL	22UF,20% ,50V,WT,TP,5X11MM,2	1
2401-003736	C715	C-AL	22UF,20% ,50V,WT,TP,5X11MM,2	1
2401-003736	C717	C-AL	22UF,20% ,50V,WT,TP,5X11MM,2	1
2401-004211	C163	C-AL	4.7uF,20% ,50V,WT,TP,5x11,5mm	1
2702-001123	L101	INDUCTOR-RADIAL	4.7uH,10% ,6.5x7.5mm	1
DB93-11367C		ASSY PCB SMD	RC100DHXEA,SMD,N	1
0401-001099	D101	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D107	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D108	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D110	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D111	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D113	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D114	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D705	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D706	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D731	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D732	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D733	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D734	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D921	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D922	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D923	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D924	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0402-001192	D104	DIODE-RECTIFIER	ES2D,200V,2A,SMB,TP	1
0402-001192	D105	DIODE-RECTIFIER	ES2D,200V,2A,SMB,TP	1
0402-001427	D103	DIODE-RECTIFIER	ES1D,200V,1A,DO-214AC,TP	1
0402-001427	D106	DIODE-RECTIFIER	ES1D,200V,1A,DO-214AC,TP	1
0402-001427	D901	DIODE-RECTIFIER	ES1D,200V,1A,DO-214AC,TP	1
0402-001472	D707	DIODE-RECTIFIER	ES1□600V,0.8A,SMA,TP	1
0402-001472	D708	DIODE-RECTIFIER	ES1□600V,0.8A,SMA,TP	1
0403-000282	ZD730	DIODE-ZENER	MMBZ5232B,5% ,300mW,SOT-23,TP	1
0403-000282	ZD731	DIODE-ZENER	MMBZ5232B,5% ,300mW,SOT-23,TP	1
0403-000461	ZD102	DIODE-ZENER	PTZ18A,16.8-19.1V,1000MW,PSM,TP	1
0404-001020	D109	DIODE-SCHOTTKY	BAT54C,30V,200mA,SOT-23,TP	1
0501-000457	Q802	TR-SMALL SIGNAL	MMBT2222A/KST2222A,NPN,350mW,SOT-23,TP,35-300	1
0504-000127	Q801	TR-DIGITAL	F□V3102R,NPN,200mW,10K/10Kohm,SOT-23,TP	1
0504-000127	Q902	TR-DIGITAL	F□V3102R,NPN,200mW,10K/10Kohm,SOT-23,TP	1
0505-000110	Q101	FET-SILICON	2N7002,N,60V,115mA,7.5ohm,0.3W,SOT-23	1
0601-001816	LD22	LED	SMD,Y-GRN,1.6x0.8x0.55mm,570nm,1.6x0.8x0.55mm	1
0601-001816	LED11	LED	SMD,Y-GRN,1.6x0.8x0.55mm,570nm,1.6x0.8x0.55mm	1
0601-001816	LED12	LED	SMD,Y-GRN,1.6x0.8x0.55mm,570nm,1.6x0.8x0.55mm	1
0601-001954	LD21	LED	SMD(TOP VIEW),YEL,1.6x0.8x0.8mm,587nm,1.6x0.8x0.8mm	1
0601-002345	LD23	LED	SMD,RED,1.6x0.8x0.55mm,660nm,1.6x0.8x0.55mm	1
0604-001172	IC301	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1
0604-001172	IC302	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1
0604-001172	PC11	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1
0801-003366	IC106	IC-CMOS LOGIC	HEF4093BT,NAND Schmitt trigger,SOT-108,14P,8.65x3.9mm,QUAD,TP,5V,-40to+125C,500mW	1
0801-003380	IC107	IC-CMOS LOGIC	HEF4081BT,2-input AND Gate,SOT-108,14P,19x6.3mm,QUAD,TP,5V,-40to+125C	1
1202-000104	IC108	IC-VOLTAGE COMP.	393,SOP,8P,150MIL,DUAL,36V,CMOS,PLASTIC,18V,780mW,0to+70C,18V,5mV,250nA,50NA,30	1

OUTDOOR MAIN PBA(DB93-11112E) - 24K (cont.)

Parts Code	Design Loc	Parts Description	Spec.	Quantity
1202-000104	IC109	IC-VOLTAGE COMP.	393,SOP,8P,150MIL,DUAL,36V,CMOS,PLASTIC,18V,780mW,0to+70C,18V,5mV,250nA,50NA,30	1
1203-001211	IC200	IC-VOL. DETECTOR	7027,SOT-89,3P,PLASTIC,500mW,-30to+75,2.7V,TP	1
1203-002948	IC102	IC-POSI.ADJUST REG.	TL431AID,SOP,8P,4.9x3.9mm,PLASTIC,-,1.5W,-40to+85,0.15A,2.5V,TP,Adjust	1
1203-005454	IC104	IC-POSI.FIXED REG.	LD1117S33-HF,SOT-223,4P,6.5x3.5mm,PLASTIC,3.267/3.333,-40to+125C,0.8,TP	1
1203-006611	IC105	IC-PWM CONTROLLER	UCC28070PWR,TSSOP,20P,6.5x4.4mm,PLASTIC,-40to+125C,TP	1
2007-000043	R214	R-CHIP	1Kohm,1% ,1/10W,TP,1608	1
2007-000043	R253	R-CHIP	1Kohm,1% ,1/10W,TP,1608	1
2007-000043	R254	R-CHIP	1Kohm,1% ,1/10W,TP,1608	1
2007-000043	R301	R-CHIP	1Kohm,1% ,1/10W,TP,1608	1
2007-000043	R304	R-CHIP	1Kohm,1% ,1/10W,TP,1608	1
2007-000043	R728	R-CHIP	1Kohm,1% ,1/10W,TP,1608	1
2007-000043	R905	R-CHIP	1Kohm,1% ,1/10W,TP,1608	1
2007-000052	R170	R-CHIP	10Kohm,1% ,1/10W,TP,1608	1
2007-000074	R215	R-CHIP	100ohm,5% ,1/10W,TP,1608	1
2007-000074	R701	R-CHIP	100ohm,5% ,1/10W,TP,1608	1
2007-000074	R702	R-CHIP	100ohm,5% ,1/10W,TP,1608	1
2007-000074	R703	R-CHIP	100ohm,5% ,1/10W,TP,1608	1
2007-000074	R704	R-CHIP	100ohm,5% ,1/10W,TP,1608	1
2007-000074	R705	R-CHIP	100ohm,5% ,1/10W,TP,1608	1
2007-000074	R706	R-CHIP	100ohm,5% ,1/10W,TP,1608	1
2007-000076	R202	R-CHIP	330ohm,5% ,1/10W,TP,1608	1
2007-000076	R302	R-CHIP	330ohm,5% ,1/10W,TP,1608	1
2007-000076	R303	R-CHIP	330ohm,5% ,1/10W,TP,1608	1
2007-000076	R906	R-CHIP	330ohm,5% ,1/10W,TP,1608	1
2007-000077	R227	R-CHIP	470ohm,5% ,1/10W,TP,1608	1
2007-000077	R228	R-CHIP	470ohm,5% ,1/10W,TP,1608	1
2007-000078	R801	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000082	R151	R-CHIP	3.3Kohm,5% ,1/10W,TP,1608	1
2007-000082	R152	R-CHIP	3.3Kohm,5% ,1/10W,TP,1608	1
2007-000084	R171	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R172	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R173	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R203	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R204	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R205	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R208	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R209	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R210	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R213	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R221	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R222	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R223	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R224	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R225	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R226	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R251	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R252	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000090	R901	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R903	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000093	R201	R-CHIP	20Kohm,5% ,1/10W,TP,1608	1
2007-000109	R217	R-CHIP	1Mohm,5% ,1/10W,TP,1608	1
2007-000111	R103	R-CHIP	6.8ohm,5% ,1/10W,TP,1608	1
2007-000219	R126	R-CHIP	1.2Kohm,1% ,1/10W,TP,1608	1
2007-000238	R723	R-CHIP	1.5Kohm,1% ,1/8W,TP,2012	1
2007-000238	R727	R-CHIP	1.5Kohm,1% ,1/8W,TP,2012	1
2007-000286	R190	R-CHIP	100ohm,1% ,1/8W,TP,2012	1
2007-000286	R191	R-CHIP	100ohm,1% ,1/8W,TP,2012	1
2007-000286	R805	R-CHIP	100ohm,1% ,1/8W,TP,2012	1
2007-000286	R808	R-CHIP	100ohm,1% ,1/8W,TP,2012	1
2007-000297	R185	R-CHIP	10Kohm,1% ,1/8W,TP,2012	1

OUTDOOR MAIN PBA(DB93-11112E) - 24K (cont.)

Parts Code	Design Loc	Parts Description	Spec.	Quantity
2007-000297	R194	R-CHIP	10Kohm,1% ,1/8W,TP,2012	1
2007-000297	R809	R-CHIP	10Kohm,1% ,1/8W,TP,2012	1
2007-000297	R810	R-CHIP	10Kohm,1% ,1/8W,TP,2012	1
2007-000394	R121	R-CHIP	150Kohm,1% ,1/4W,TP,3216	1
2007-000394	R122	R-CHIP	150Kohm,1% ,1/4W,TP,3216	1
2007-000394	R123	R-CHIP	150Kohm,1% ,1/4W,TP,3216	1
2007-000394	R124	R-CHIP	150Kohm,1% ,1/4W,TP,3216	1
2007-000394	R125	R-CHIP	150Kohm,1% ,1/4W,TP,3216	1
2007-000394	R141	R-CHIP	150Kohm,1% ,1/4W,TP,3216	1
2007-000394	R142	R-CHIP	150Kohm,1% ,1/4W,TP,3216	1
2007-000394	R143	R-CHIP	150Kohm,1% ,1/4W,TP,3216	1
2007-000394	R144	R-CHIP	150Kohm,1% ,1/4W,TP,3216	1
2007-000394	R145	R-CHIP	150Kohm,1% ,1/4W,TP,3216	1
2007-000465	R722	R-CHIP	1Kohm,1% ,1/8W,TP,2012	1
2007-000465	R726	R-CHIP	1Kohm,1% ,1/8W,TP,2012	1
2007-000501	R181	R-CHIP	2.2ohm,1% ,1/10W,TP,1608	1
2007-000619	R111	R-CHIP	24ohm,5% ,1/4W,TP,3216	1
2007-000619	R113	R-CHIP	24ohm,5% ,1/4W,TP,3216	1
2007-000633	R183	R-CHIP	270Kohm,1% ,1/10W,TP,1608	1
2007-000682	R718	R-CHIP	3.3Kohm,1% ,1/8W,TP,2012	1
2007-000683	R109	R-CHIP	3.3Kohm,1% ,1/10W,TP,1608	1
2007-000683	R127	R-CHIP	3.3Kohm,1% ,1/10W,TP,1608	1
2007-000766	R241	R-CHIP	330ohm,5% ,1/8W,TP,2012	1
2007-000766	R242	R-CHIP	330ohm,5% ,1/8W,TP,2012	1
2007-000766	R243	R-CHIP	330ohm,5% ,1/8W,TP,2012	1
2007-000842	R187	R-CHIP	3Kohm,1% ,1/10W,TP,1608	1
2007-000842	R192	R-CHIP	3Kohm,1% ,1/10W,TP,1608	1
2007-000842	R707	R-CHIP	3Kohm,1% ,1/10W,TP,1608	1
2007-000868	R147	R-CHIP	4.7Kohm,1% ,1/8W,TP,2012	1
2007-000868	R188	R-CHIP	4.7Kohm,1% ,1/8W,TP,2012	1
2007-000868	R212	R-CHIP	4.7Kohm,1% ,1/8W,TP,2012	1
2007-000869	R720	R-CHIP	4.7Kohm,1% ,1/10W,TP,1608	1
2007-000869	R721	R-CHIP	4.7Kohm,1% ,1/10W,TP,1608	1
2007-000869	R724	R-CHIP	4.7Kohm,1% ,1/10W,TP,1608	1
2007-000869	R725	R-CHIP	4.7Kohm,1% ,1/10W,TP,1608	1
2007-000869	R902	R-CHIP	4.7Kohm,1% ,1/10W,TP,1608	1
2007-000909	R164	R-CHIP	43Kohm,1% ,1/8W,TP,2012	1
2007-000924	R114	R-CHIP	470Kohm,1% ,1/4W,TP,3216	1
2007-000924	R115	R-CHIP	470Kohm,1% ,1/4W,TP,3216	1
2007-000924	R116	R-CHIP	470Kohm,1% ,1/4W,TP,3216	1
2007-000924	R117	R-CHIP	470Kohm,1% ,1/4W,TP,3216	1
2007-000082		R-CHIP	3.3Kohm,5% ,1/10W,TP,1608	1
2007-000929	R108	R-CHIP	470ohm,1% ,1/10W,TP,1608	1
2007-000950	R102	R-CHIP	47ohm,5% ,1/4W,TP,3216	1
2007-000950	R110	R-CHIP	47ohm,5% ,1/4W,TP,3216	1
2007-000950	R112	R-CHIP	47ohm,5% ,1/4W,TP,3216	1
2007-000962	R184	R-CHIP	5.1Kohm,1% ,1/10W,TP,1608	1
2007-001023	R165	R-CHIP	560Kohm,1% ,1/10W,TP,1608	1
2007-001067	R193	R-CHIP	6.8Kohm,1% ,1/8W,TP,2012	1
2007-001096	R163	R-CHIP	62Kohm,1% ,1/10W,TP,1608	1
2007-001139	R167	R-CHIP	7.5Kohm,1% ,1/10W,TP,1608	1
2007-001139	R168	R-CHIP	7.5Kohm,1% ,1/10W,TP,1608	1
2007-001175	R717	R-CHIP	8.2Kohm,1% ,1/10W,TP,1608	1
2007-001433	R169	R-CHIP	12Kohm,1% ,1/10W,TP,1608	1
2007-001652	R146	R-CHIP	1.6Kohm,1% ,1/8W,TP,2012	1
2007-002454	R216	R-CHIP	5.1Mohm,5% ,1/10W,TP,1608	1
2007-007342	R107	R-CHIP	1.82Kohm,1% ,1/10W,TP,1608	1
2007-007445	R106	R-CHIP	9.09Kohm,1% ,1/10W,TP,1608	1
2007-007455	R186	R-CHIP	24.9Kohm,1% ,1/10W,TP,1608	1
2007-007455	R189	R-CHIP	24.9Kohm,1% ,1/10W,TP,1608	1
2007-007720	R182	R-CHIP	300Kohm,1% ,1/10W,TP,1608	1
2007-007790	R195	R-CHIP	20ohm,1% ,1W,TP,6432	1
2007-007790	R196	R-CHIP	20ohm,1% ,1W,TP,6432	1
2007-007818	R162	R-CHIP	360Kohm,1% ,1/10W,TP,1608	1

OUTDOOR MAIN PBA(DB93-11112E) - 24K (cont.)

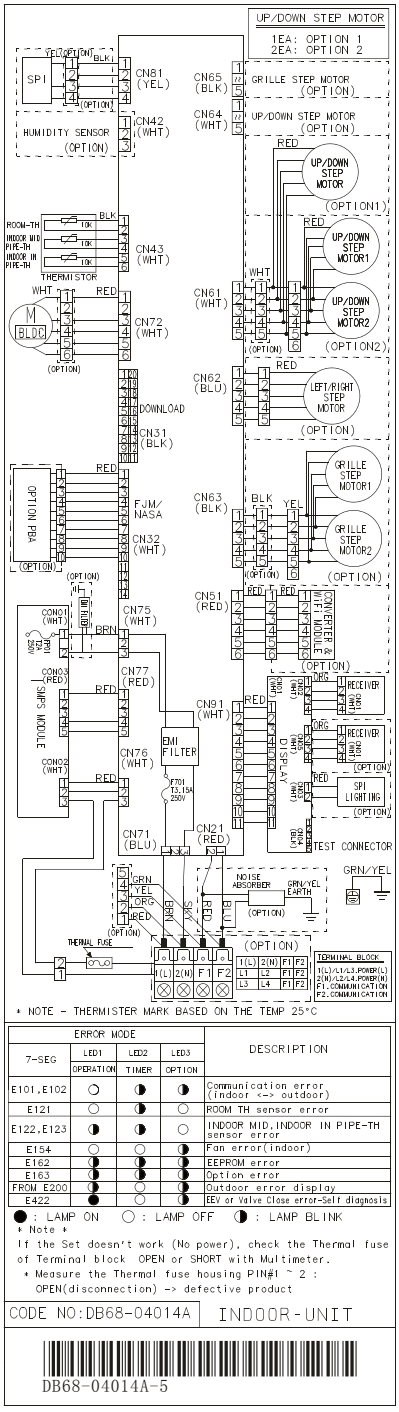
Parts Code	Design Loc	Parts Description	Spec.	Quantity
2203-000142	C155	C-CER,CHIP	1.5nF,10% ,50V,X7R,2012	1
2203-000142	C157	C-CER,CHIP	1.5nF,10% ,50V,X7R,2012	1
2203-000206	C710	C-CER,CHIP	100nF,10% ,50V,X7R,TP,2012	1
2203-000257	C216	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C217	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C301	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C302	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C303	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C727	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000440	C218	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C251	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C252	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C253	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C255	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C702	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C703	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C704	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C705	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C706	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C707	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C723	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C731	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C732	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C734	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C735	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000444	C711	C-CER,CHIP	1nF,10% ,50V,X7R,TP,2012	1
2203-000802	C150	C-CER,CHIP	33nF,10% ,50V,X7R,TP,2012	1
2203-000888	C153	C-CER,CHIP	4.7nF,10% ,50V,X7R,TP,1608	1
2203-001211	C154	C-CER,CHIP	8.2nF,10% ,50V,X7R,TP,1608	1
2203-001211	C156	C-CER,CHIP	8.2nF,10% ,50V,X7R,TP,1608	1
2203-002002	C208	C-CER,CHIP	0.033nF,5% ,50V,NP0,TP,1608	1
2203-002002	C209	C-CER,CHIP	0.033nF,5% ,50V,NP0,TP,1608	1
2203-002002	C210	C-CER,CHIP	0.033nF,5% ,50V,NP0,TP,1608	1
2203-002002	C211	C-CER,CHIP	0.033nF,5% ,50V,NP0,TP,1608	1
2203-002002	C212	C-CER,CHIP	0.033nF,5% ,50V,NP0,TP,1608	1
2203-002002	C213	C-CER,CHIP	0.033nF,5% ,50V,NP0,TP,1608	1
2203-002002	C804	C-CER,CHIP	0.033nF,5% ,50V,NP0,TP,1608	1
2203-002002	C805	C-CER,CHIP	0.033nF,5% ,50V,NP0,TP,1608	1
2203-002398	C221	C-CER,CHIP	22nF,10% ,50V,X7R,TP,1608	1
2203-005227	C128	C-CER,CHIP	0.022nF,5% ,50V,R2H,1608	1
2203-005249	C105	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C107	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C108	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C113	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C115	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C117	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C119	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C124	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C126	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C158	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C159	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C162	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C164	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C165	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C166	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C167	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C168	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C169	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C204	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C205	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C206	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C207	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C219	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C709	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1

OUTDOOR MAIN PBA(DB93-11112E) - 24K (cont.)

Parts Code	Design Loc	Parts Description	Spec.	Quantity
2203-005249	C714	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C716	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C718	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C721	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C730	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C733	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C802	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C902	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C903	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005261	C120	C-CER,CHIP	1000nF,10% ,25V,X7R,TP,3216	1
2203-005261	C724	C-CER,CHIP	1000nF,10% ,25V,X7R,TP,3216	1
2203-006348	C201	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1608,0.8T	1
2203-006348	C202	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1608,0.8T	1
2203-006348	C203	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1608,0.8T	1
2203-006348	C214	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1608,0.8T	1
2203-006348	C803	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1608,0.8T	1
2203-006348	C905	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1608,0.8T	1
2203-006460	C151	C-CER,CHIP	2200nF,10% ,16V,X5R,TP,1608,-	1
2203-006496	C170	C-CER,CHIP	2.2nF,10% ,50V,X7R,1608	1
2203-006636	C152	C-CER,CHIP	220nF,10% ,25V,X7R,TP,1608	1
2203-007149	C133	C-CER,CHIP	3.3nF,10% ,100V,X7R,TP,1608	1
2203-007149	C171	C-CER,CHIP	3.3nF,10% ,100V,X7R,TP,1608	1
2203-007149	C172	C-CER,CHIP	3.3nF,10% ,100V,X7R,TP,1608	1
2802-001211	X201	RESONATOR-CERAMIC	8MHZ,0.1% ,TP,3.2X1.3X0.9 MM	1
3201-001860	IC700	SENSOR MAG	ACS710KLATR-12CB-T,37.5A,-40to+125C,8V	1
3201-001860	IC701	SENSOR MAG	ACS710KLATR-12CB-T,37.5A,-40to+125C,8V	1
DB13-00003A	Q901	IC DRIVER GATE	-,SOT-23,-,-,1P,1P,0.2mm,2.93x1.3mm	1
DB41-01031A	PCB	PCB MAIN-INVERTER	RC100DHXEA, RC100PHXEA, RC125PHXEA,FR-4,2,ver 0.6,T1.6,220X195,UB1, UB2,1,Outdoor,2oz, Inverter Platform #4,600	1
DB91-01413A	IC201	ASSY MICOM	Global 4way LCI_Outdoor INV Micom,STM-1137-OA, LM3S817, 48LQFP, ROM 64KB	1
DB09-00591A	-	IC MICOM	LM3S817,48,DC3V,50 MHz,LQFP,LQFP,LQFP,-40 ~ 85,64KB,LQFP	1
DB95-00769A	R700	ASSY-R CEMENT	AS18BPBX,10mohm,15W	1
DB95-04685A	ASSY HEAT SINK1	ASSY HEAT SINK	RC100DHXEA, RC100PHXEA,Inverter #4, 1phase	1
1203-002560	-	IC-POSI.FIXED REG.	NJM7805,TO-220F,3P,PLASTIC,5V,16W,-30to+150,1A,-,ST	1
6002-000630	-	SCREW-TAPPING	PH,+,NO,2S,M3,L8,ZPC(WHT),SWRCH18A	1
DB62-07573A	-	HEAT SINK	AIXCSH072B1,AL6063,T1.2,W15,L14,30,SCREW	1
DB95-04685B	ASSY HEAT SINK2	ASSY HEAT SINK	RC100DHXEA, RC100PHXEA,Inverter #4, 1phase	1
1203-000242	-	IC-POSI.FIXED REG.	7812,TO-220,3P,-,PLASTIC,11.5/	1
6002-000630	-	SCREW-TAPPING	PH,+,NO,2S,M3,L8,ZPC(WHT),SWRCH18A	1
DB62-07573A	-	HEAT SINK	AIXCSH072B1,AL6063,T1.2,W15,L14,30,SCREW	1

7. Wiring Diagram

7-1 Indoor Unit



ERROR MODE				DESCRIPTION
7-SEG	LED1 OPERATION	LED2 TIMER	LED3 OPTION	
E101,E102	○	◑	◑	Communication error (Indoor <-> outdoor)
E121	○	◑	○	ROOM TH sensor error
E122,E123	◑	◑	○	INDOOR MID,INDOOR IN PIPE-TH sensor error
E154	○	○	◑	Fan error(indoor)
E162	◑	◑	◑	EEPROM error
E163	◑	◑	◑	Option error
FROM E200	◑	○	◑	Outdoor error display
E422	●	○	◑	EEV or Valve Close error-Self diagnosis

● : LAMP ON ○ : LAMP OFF ◑ : LAMP BLINK

* Note *

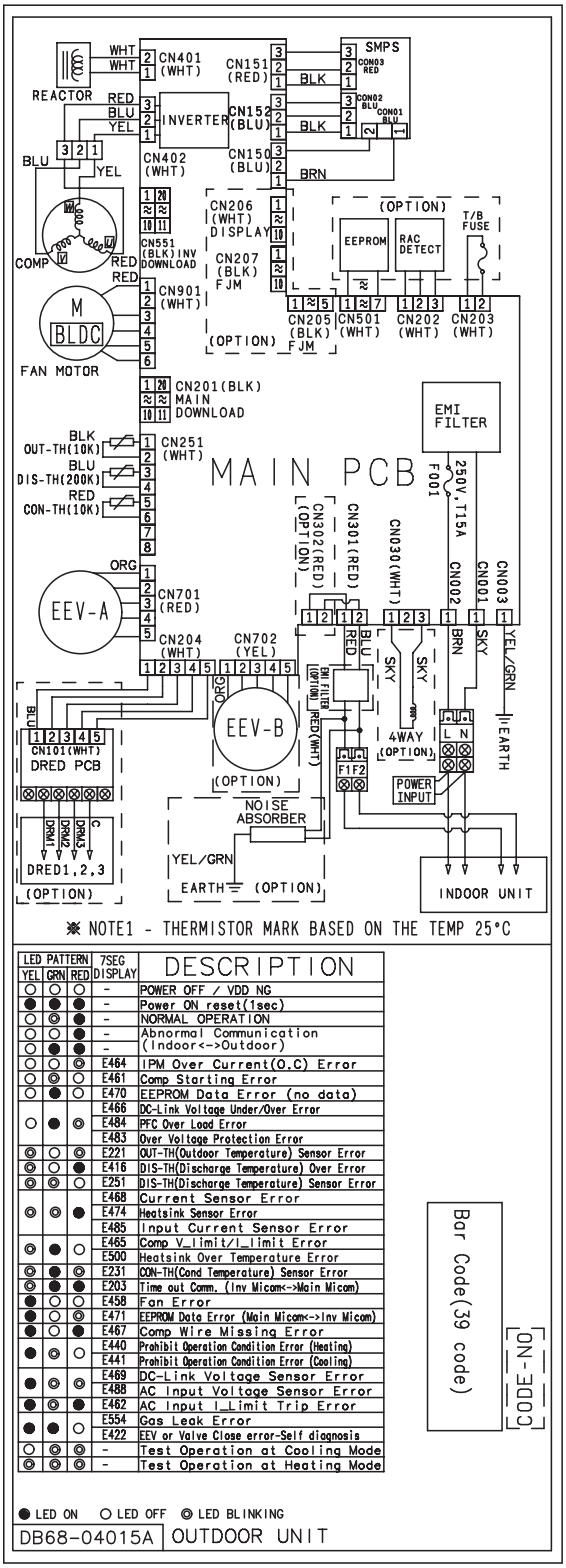
If the Set doesn't work (No power), check the Thermal fuse of Terminal block OPEN or SHORT with Multimeter.

* Measure the Thermal fuse housing PIN#1 ~ 2 :
OPEN(disconnection) -> defective product

CODE NO:DB68-04014A INDOOR-UNIT

DB68-04014A-5

7-2 Outdoor Unit



LED PATTERN YEL	LED PATTERN GRN	LED PATTERN RED	7SEG DISPLAY	DESCRIPTION
○	○	○	-	POWER OFF / VDD NG
●	●	●	-	Power ON reset(1sec)
○	◎	●	-	NORMAL OPERATION
○	○	●	-	Abnormal Communication (Indoor<->Outdoor)
○	●	●	-	
○	○	◎	E464	IPM Over Current(O.C) Error
○	◎	○	E461	Comp Starting Error
○	●	○	E470	EEPROM Data Error (no data)
○	●	◎	E466	DC-Link Voltage Under/Over Error
			E484	PFC Over Load Error
			E483	Over Voltage Protection Error
◎	○	◎	E221	OUT-TH(Outdoor Temperature) Sensor Error
◎	○	●	E416	DIS-TH(Discharge Temperature) Over Error
◎	◎	○	E251	DIS-TH(Discharge Temperature) Sensor Error
◎	◎	●	E468	Current Sensor Error
			E474	Heatsink Sensor Error
			E485	Input Current Sensor Error
◎	●	○	E465	Comp V_limit/I_limit Error
			E500	Heatsink Over Temperature Error
◎	●	◎	E231	CON-TH(Cond Temperature) Sensor Error
◎	●	●	E203	Time out Comm. (Inv Micom<->Main Micom)
●	○	○	E458	Fan Error
●	○	◎	E471	EEPROM Data Error (Main Micom<->Inv Micom)
●	○	●	E467	Comp Wire Missing Error
●	◎	○	E440	Prohibit Operation Condition Error (Heating)
			E441	Prohibit Operation Condition Error (Cooling)
●	◎	◎	E469	DC-Link Voltage Sensor Error
			E488	AC Input Voltage Sensor Error
●	◎	●	E462	AC Input I_Limit Trip Error
●	●	○	E554	Gas Leak Error
			E422	EEV or Valve Close error-Self diagnosis
○	◎	◎	-	Test Operation at Cooling Mode
◎	◎	◎	-	Test Operation at Heating Mode

Bar Code(39 code)

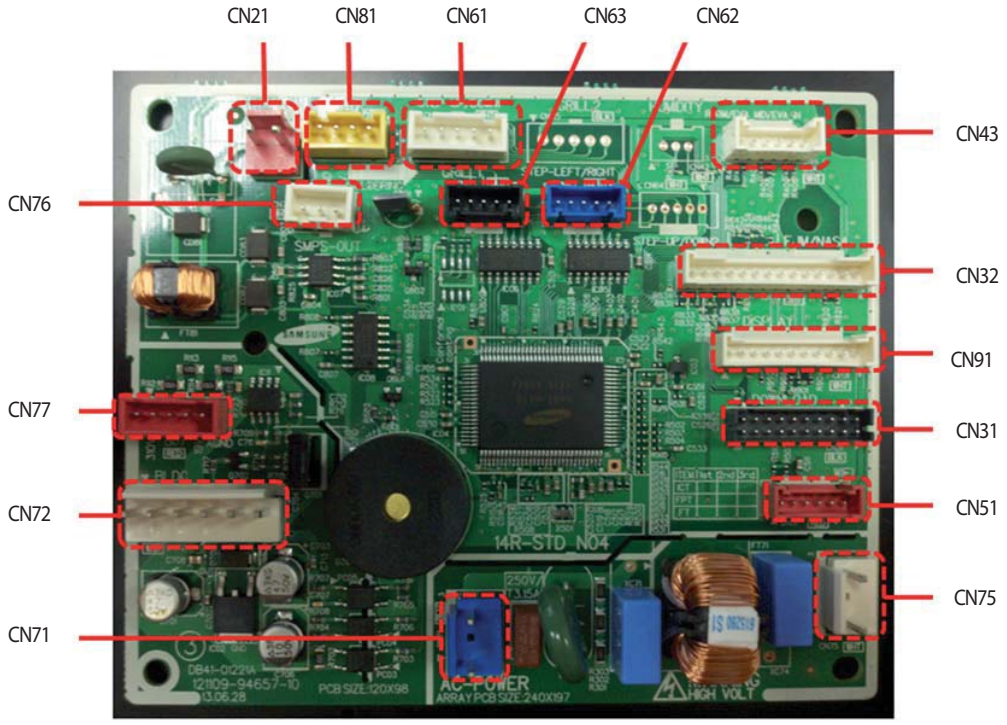
CODE-NO

● LED ON ○ LED OFF ◎ LED BLINKING

DB68-04015A | OUTDOOR UNIT

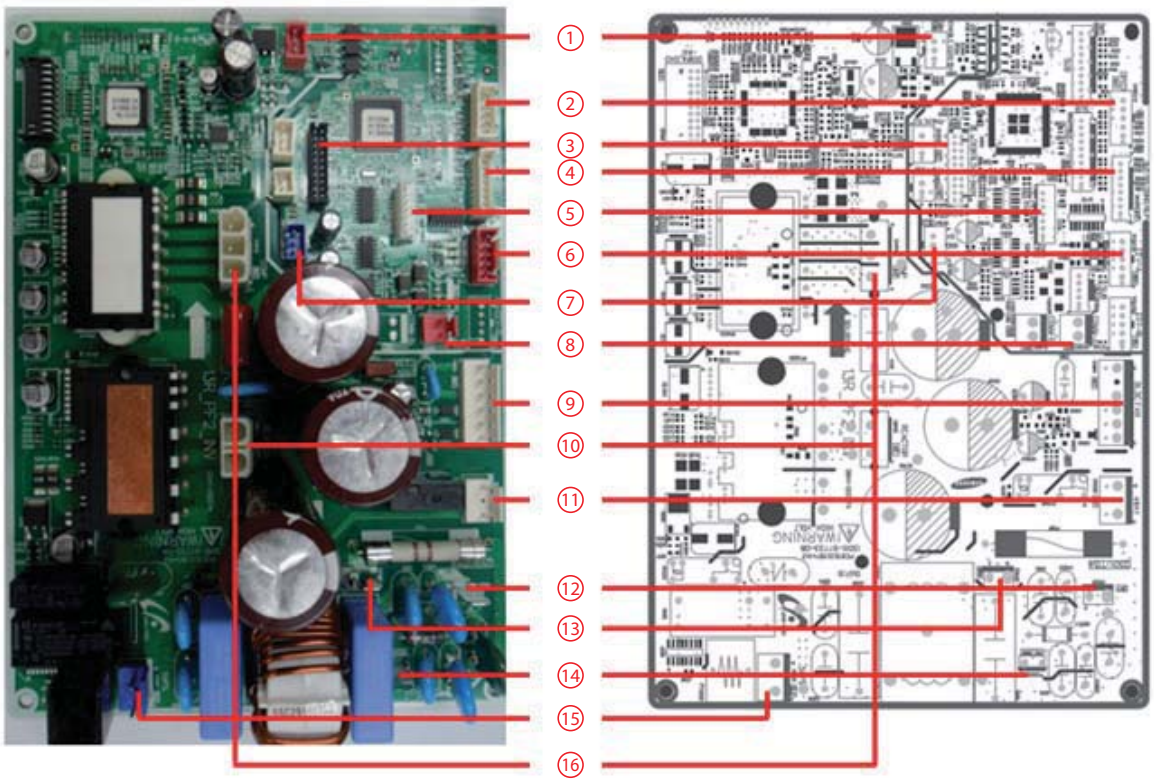
8. PCB Diagram

8-1 Indoor PCB



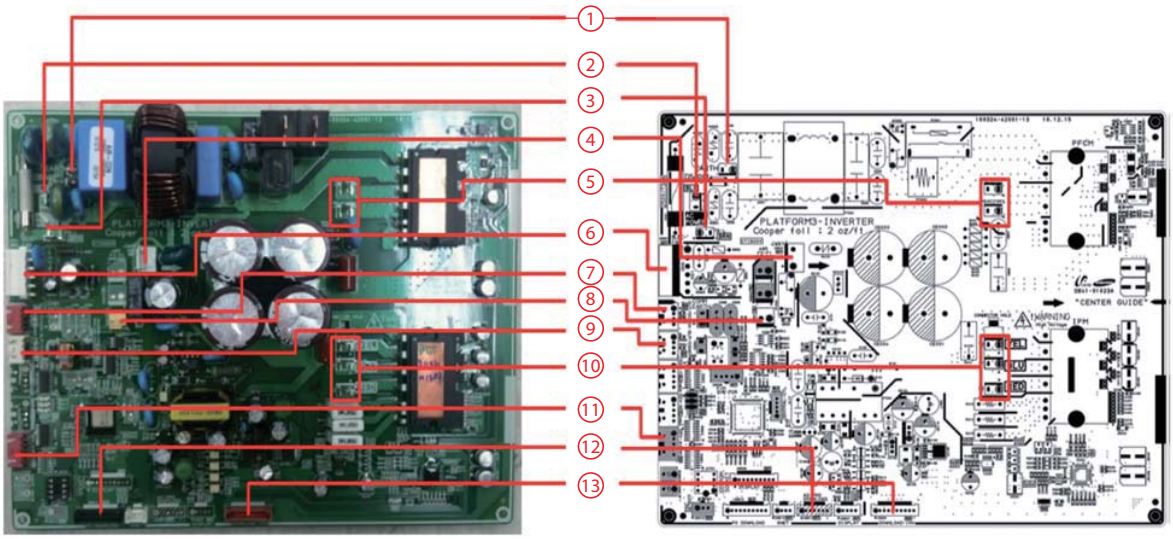
① **CN61/CN62/CN63 - STEP MOTOR** #1: DC 12V #2~#5 :STEP MOTOR SIGNAL	② **CN71 - POWER IN** #1,#3 : AC220~240V #2 : N.C	③ **CN81 - SPI** #1: SPI SIGNAL #3 : DC 12V	④ **CN51 - WI-FI MODULE** #1 : WIFI UART SIGNAL1 #2 : WIFI UART SIGNAL2 #3 : WIFI RESET SIGNAL #4 : GND #5 : DC 12V #6 : N.C
⑤ **CN51 - DISPLAY** #1~#11,#14,#17~#20 : MICOM DOWN #12, #13, #15, #16 : N.C	⑥ **CN43 - TEMPERATURE SENSOR** #1,#2 : ROOM SENSOR #3,#4 : EVA MID SENSOR #5,#6 : EVA IN SENSOR	⑦ **CN21 - COMMUNICATION** #1,#2 : 485 COMM SIGNAL	⑧ **CN72 - BLDC FAN MOTOR** #1 : DC 310~340V #2 : N.C #3 : AGND #4 : DC 15V #5 : FAN RPM #6 : FAN FEEDBACK
⑨ **CN32 - FJM/NASA** #1~#7, #11~ #14 : FJM/NASA SIGNAL #8 : DC 5V #9 : GND #10 : DC 12V	⑩ **CN75 - SMPS POWER IN** #1,#3 : AC220~240V #2 : N.C	⑪ **CN76 - SMPS DC OUT (12V/GND/5V)** #1 : DC 5V #2 : GND #3 : DC 12V	⑫ **CN77 - SMPS DC OUT (19V/GND/310V)** #1 : DC 310V~340V #2,#3 : N.C #4 : DC 19V~27V #5 : AGND
⑬ **CN31 - DOWNLOAD** DOWNLOAD			

8-2 Outdoor PCB (9K/12K)



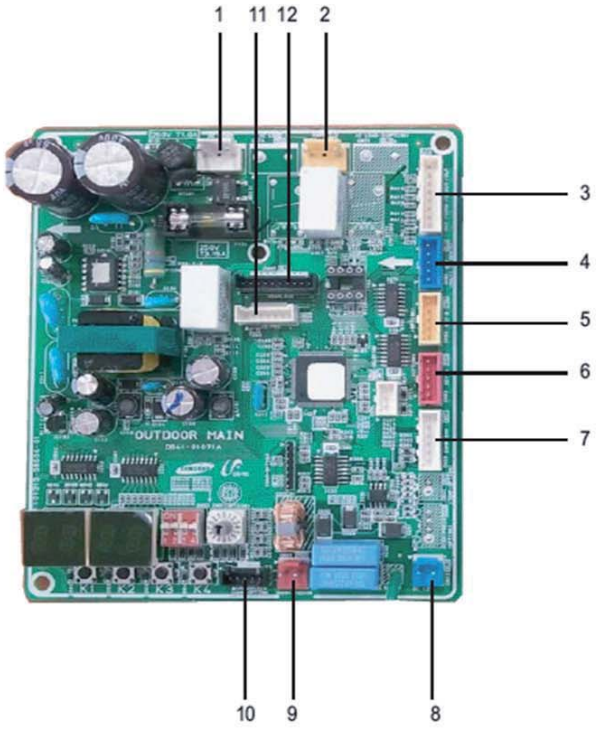
① **CN151 - SMPS INV** #1 : 15V #2 : GND #3 : ENABLE	② **CN204 - DRED** #1 : DRED1 #2 : DRED2 #3 : DRED3 #4 : GND #5 : 5V	③ **CN201- DOWNLOAD-MAIN** #1 ~ #20 : DOWNLAOD	④ **CN251 - SENSOR** #1,#2 : OUT SENSOR #3,#4 : DISCHARGE SENSOR #5,#6 : COND SENSOR
⑤ **CN501 - EEPROM** #1 : GND #3 : 5V #4 : EEP CS #5 : EEP_SO/MICOM RX #6 : EEP_SI_MICOM_TX #7 : EEP CLK	⑥ **CN701 - EEV-A** #1~#4 : EEV SIGNAL #5 : 12V	⑦ **CN152 - SMPS MAIN** #1 : 12V #2 : GND #3 : 5V	⑧ **CN301 - COMMUNICATION** #1 : F1 #2 : F2
⑨ **CN901 - FAN** #1 : DC 310~340V #2 : N.C #3 : AGND #4 : DC 15V #5 : FAN RPM #6 : FAN FEEDBACK	⑩ **CN401- REACTOR** #1 : REACTOR1 #2 : REACTOR2	⑪ **CN030 - 4WAY** #1,#3 : AC220~240V	⑫ **CN001 - POWER-N** #1 : N
⑬ **CN002 - POWER-L** #1 : L	⑭ **CN003 - EARTH** #1 : EARTH	⑮ **CN150 - SMPS AC** #1,#3 : AC220~240V	⑯ **CN402 - COMP** #1 : W #2 : V #3 : U

Outdoor PCB (18K)



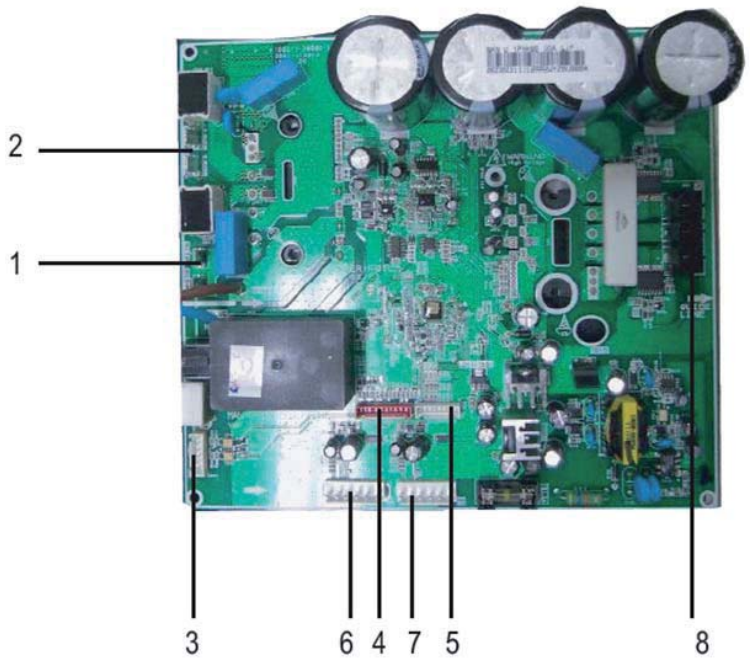
① **EARTH - EARTH** #1 : EARTH	② **TB-N - POWER N** #1 : N	③ **TB-L - POWER L** #1 : L	④ **CN001 - 4-WAY** #1,#3 : AC220~240V
⑤ **REACTOR1/2 - REACTOR** #1 : REACTOR1 #1 : REACTOR2	⑥ **CN901 - FAN MOTOR** #1 : DC 310~340V #2 : N.C #3 : AGND #4 : DC 15V #5 : FAN RPM #6 : FAN FEEDBACK	⑦ **CN502 - TEMP SENSOR-OUT/DIS** #1, #2 : OUT SENSOR #3, #4 : DISCHARGE SENSOR	⑧ **CN301 - COMMUNICATION** #1 : F1 #2 : F2
⑨ **CN501 - TEMP SENSOR-COND** #1, #2 : OLP SENSOR #3, #4 : COND SENSOR	⑩ **U/V/W - COMP** U : U V : V W : W	⑪ **CN503 - EEV** #1~#4 : EEV SIGNAL #5 : 12V	⑫ **CN512 - DOWNLOAD-MAIN** #1~#10 : DOWNLOAD
⑬ **CN201 - DOWNLOAD-INV** #1~#10 : DOWNLOAD			

Outdoor PCB (OUTDOOR MAIN PBA) - 24K



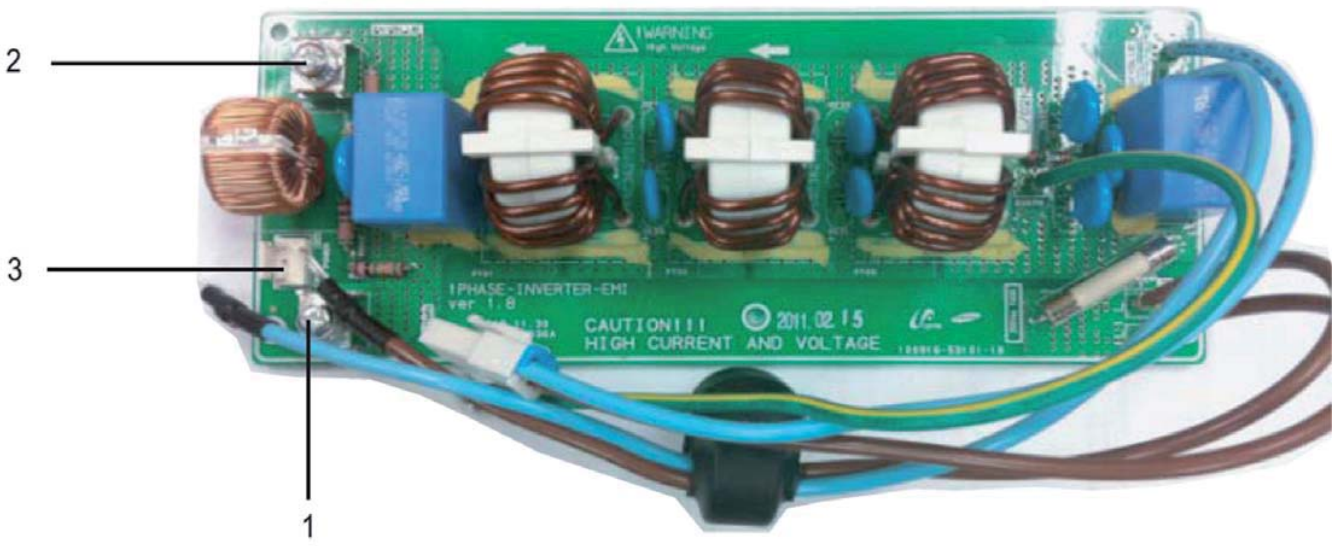
1 **CN11-ACPOWER** #1~#3 : 220~240 Vac	2 **CN75-4WAY V/V** #1~#3 : 220~240 Vac	3 **CN43-Sensor** #1~#2 Outdoor Temp #3~#4 Cond Temp #5~#6 Discharge Temp #7~#8 OLP Temp	4 **CN81-EEV C** #1~#4 EEV signal #5 DC 12V
5 **CN82-EEV B** #1~#4 EEV signal #5 DC 12V	6 **CN81-EEV A** #1~#4 EEV signal #5 DC 12V	7 **CN39-COMM-INV** #1 TXD #2 RXD #3 GND #4 DC 5V #5 DC 12V #6 INV. SMPS signal	8 **CN12 - DC12V** #1 DC12V #2 GND
9 **CN31 - COMM** #1 : COM1 #2 : COM2	10 **CN33-Sub Comm** #1 DC12V #2 GND #3 DC5V #4 COM1 #5 COM2	11 **CN37-MICOM DOWN** #1~#10 MICOM DOWN	12 **CN35- AS PROM** #1~#7 MICOM DOWN (AS PRO USING)

Outdoor PCB (OUTDOOR INVERTER PBA) - 24K



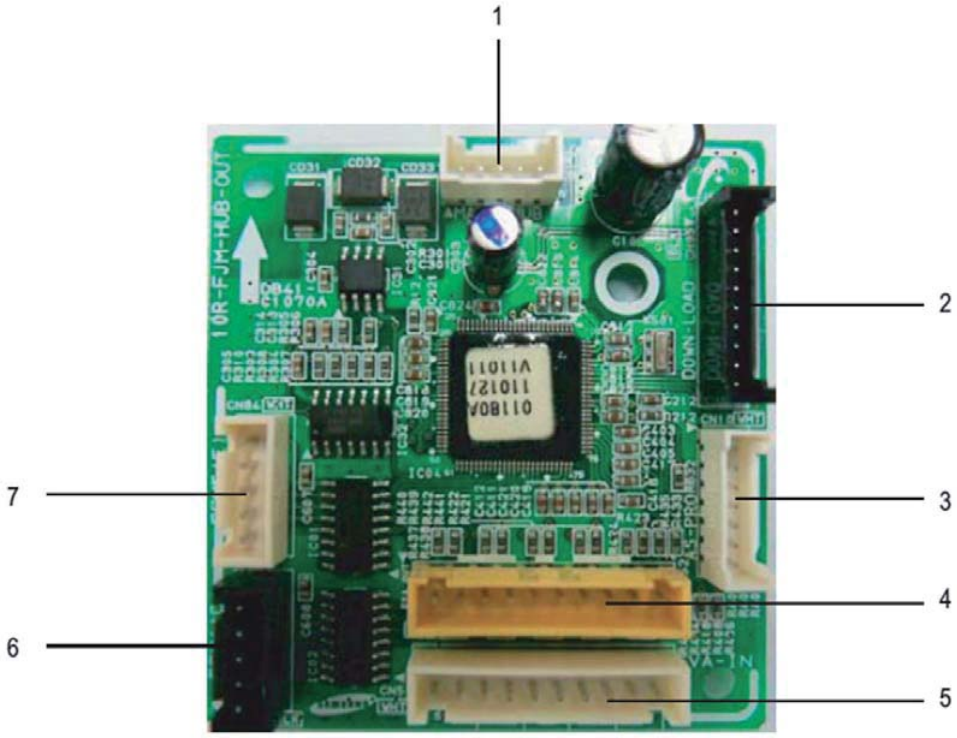
① Reactor-A1/B1	② Reactor-A2/B2	③ CN50(2PIN/RED)-Communication	④ CN22-Downloader
#Reactor-A2 : WHT #Reactor-B2 : WHT	#Reactor-A2 : BLK #Reactor-B2 : BLK	#1 : RXD, #2 : TXD #3 : GND, #4 : DC 5V #5 : DC 12V, #6 : INV. SMPS signal	#1 : RXD_ATARO, #2 : TXD_ATARO #3, #8 : N.C, #4~#7 : DATA signal #9 : GND, #10 : DC 5V
⑤ CN21-DAC/ENCODER	⑥ CN91-FAN2	⑦ CN90-FAN1	⑧ CN71-COMP.
For S/W engineer debugging	#1 : DC 360V #2 : N.C #3 : GND #4 : DC 15V #5 : FAN RPM #6 : FAN RPM feedback	#1 : DC 360V #2 : N.C #3 : GND #4 : DC 15V #5 : FAN RPM #6 : FAN RPM feedback	#1 : COMP. U-phase(RED) #2 : COMP. V-phase(BLU) #3 : COMP. U-phase(YEL)

Outdoor PCB (OUTDOOR EMI PBA) - 24K



① L1-AC POWER L phase	② N1-AC POWER N phase	③ CN01-AC POWER
L1 : BRN	N1 : SKY-BLU	#1-#3 : AC 220~240V

Outdoor PCB (OUTDOOR SUB PBA) - 24K



1 CN33-Sub Comm #1 DC12V #2 GND #3 DC5V #4 COM1 #5 COM2	2 CN10-MICOM DOWN #1~#10 MICOM DOWN	3 CN10- AS PROM #1~#7 MICOM DOWN (AS PRO USING)	4 CN52 EVA IN SENSOR #1~#2 EVA IN A #3~#4 EVA IN B #5~#6 EVA IN C #7~#8 EVA IN D #9~#10 EVA IN E
5 CN52 EVA OUT SENSOR #1~#2 EVA OUT A #3~#4 EVA OUT B #5~#6 EVA OUT C #7~#8 EVA OUT D #9~#10 EVA OUT E	6 CN83-EEV D #1~#4 EEV signal #5 DC 12V	7 CN84-EEV E #1~#4 EEV signal #5 DC 12V	

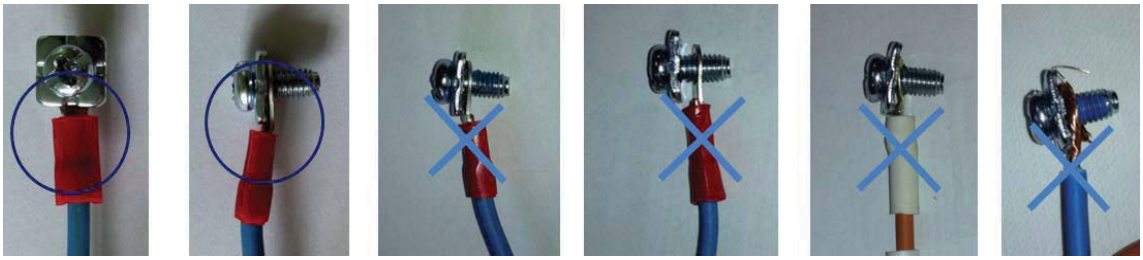
8-3 Wire connecting the indoor unit terminal blocks

1. Terminal press of Ring terminal shall be set facing up before connecting wire.

Is inverted

Terminalhasbeencut.

2. There shall be no empty space between Ring terminal and Screw after Clamp.
   If not, there exists a possibility of fire which can be caused by electric heat in the connecting part.



① ② ③ ④ ⑤ ⑥

①, ② : Good
③ Bad : Ring terminal is connected reversely
④ Bad : Not clamped Screw
⑤ Bad : In the gap between Ring terminal & Screw
⑥ Bad : Unused Ring Terminal

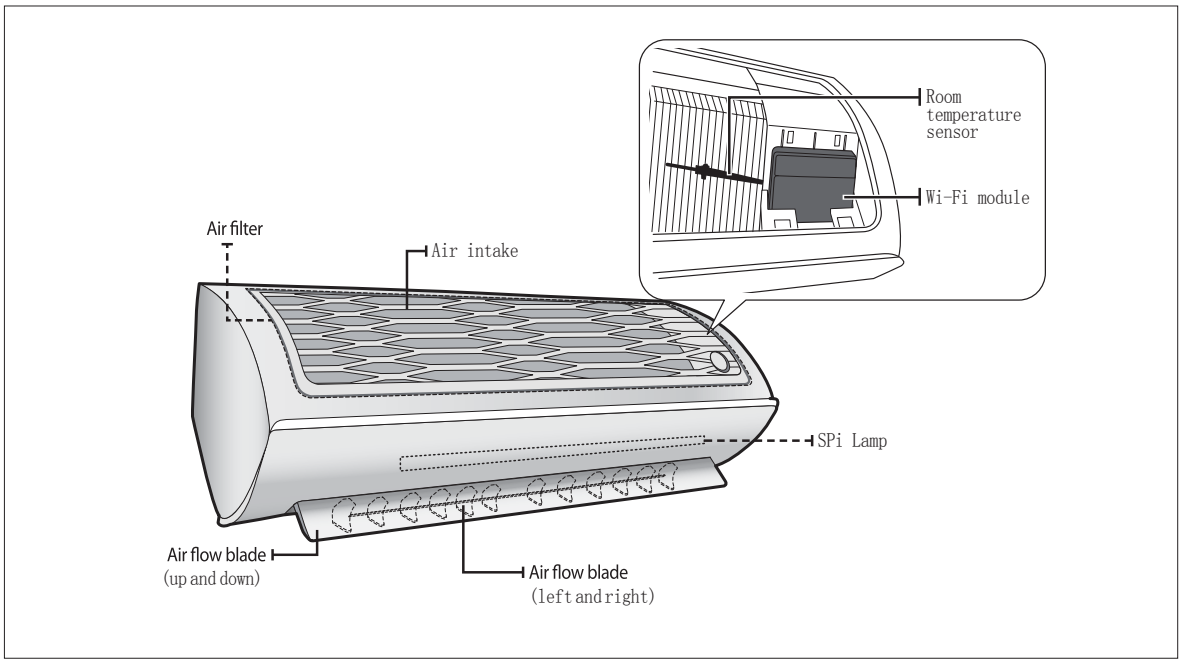
9. Operating Instructions

9-1 Name of Each Part

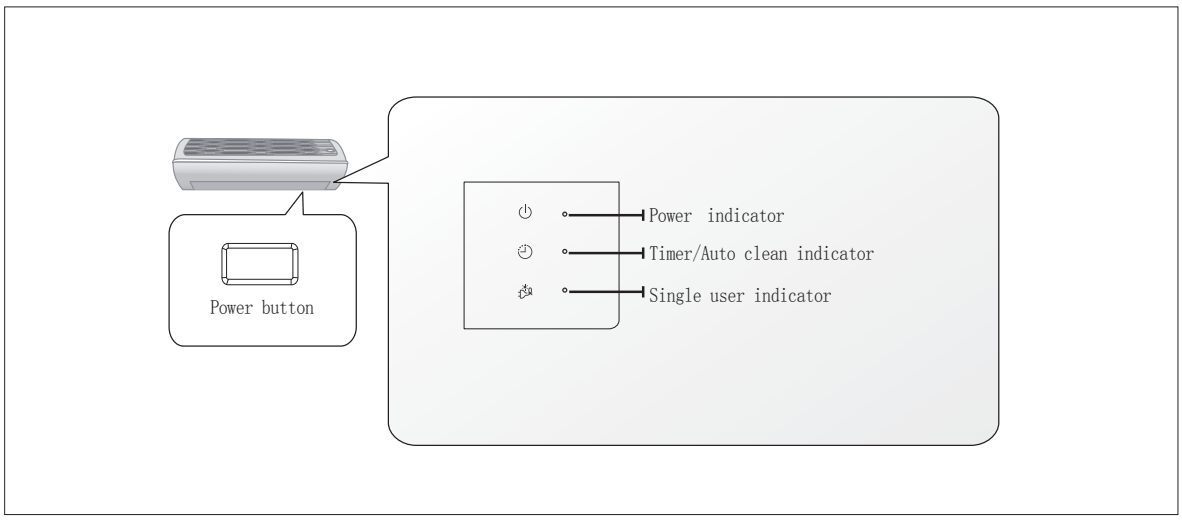
9-1-1 Indoor Unit

The design and shape are subject to change according to the model.

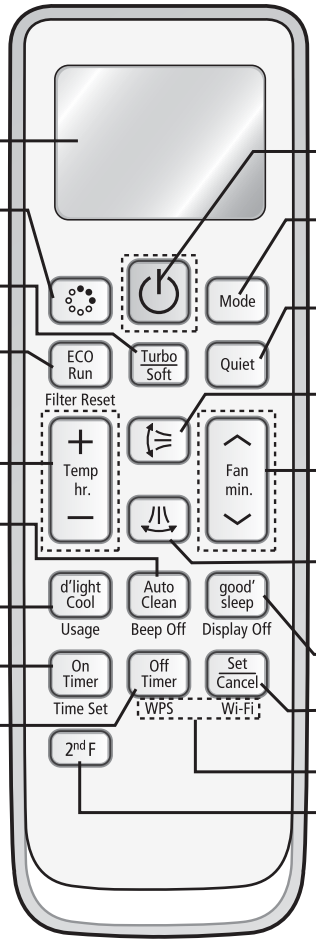
■Main Parts



■Display



9-2 Wireless Remote Control-Buttons and Display



Remote controller display

SPi
Set the **SPi** function on/off.

Turbo / Soft
Select Ultra turbo function or Soft function

ECO Run
Turn on/off the ECO Run function which reduces energy usage while operating in cool/heat mode.

Temp + -
Increase/Decrease the temperature by 1 ˚C.

Auto Clean
Auto clean function – Dry inside of the indoor unit to get rid of odor.

d'light Cool
Set the d'light Cool function on/off.

On Timer
Set the On Timer on.

Off Timer
Set the Off Timer on.

Power
Turn on/off the air conditioner.

Mode
Set one of the 5 operating modes (see pages 15~16 for instructions).

Quiet
Reduce noise generated from an indoor unit during operation.

Vertical air swing
Activate/Deactivate air flow blade movement automatically up and down.

Fan
Adjust how much air flows through the air conditioner with the 5 different fan speeds such as Auto/Low/Medium/High/Turbo.

Horizontal air swing
Activate/Deactivate air flow blade movement automatically left and right.

good'sleep
Set the **good'sleep** mode on.

Set/Cancel
Set/Cancel the timer/**good'sleep** mode.

SMART Air conditioner Network.

2ndF
Switch the function of the button on the remote controller.

Filter Reset
Reset the Filter Clean reminder

Usage
Display the amount of power consumption for few seconds on the indoor unit display:

Beep off
To silence the beep sound when pressing the button.

Display off
To turn off the display light

Time set
Set the current time

10. Troubleshooting

10-1 Items to be checked first

1. The input voltage should be rating voltage ±10% range.
   The air conditioner may not operate properly if the voltage is out of this range.

2. Is the line cable linking the indoor unit and the outdoor unit linked properly?
   The indoor unit and the outdoor unit shall be linked by 5 cables.
   Check the terminals if the indoor unit and outdoor unit are properly linked by the same number of cables.
   Otherwise the air conditioner may not operate properly.

3. When a problem occurs due to the contents illustrated in the table below it is a symptom not related to the malfunction of the air conditioner.

NO	Operation of air conditioner	Explanation
1	The OPERATION indication LED(BLUE) blinks when a power plug of the indoor unit is plugged in for first time.	It indicates power is on. The LED stops blinking if the operation ON/OFF button on the remote control unit is pushed.
2	In a COOL operation mode, the compressor does not operate at a room temperature higher than the setting temperature that the INDOOR FAN should operate. **[In case of heat pump model]** In a HEAT operation mode, the compressor does not operate at a room temperature lower than the setting temperature that indoor fan should operate.	In happens after a delay of 3 minutes when the compressor is reoperated. The same phenomenon occurs when a power is on. As a phenomenon that the compressor is reoperated after a delay of 3 minutes, the indoor fan is adjusted automatically with reference to a temperature of the air blew.
3	Fan speed setting is not allowed in DRY mode.	The speed of the indoor fan is set to LL in DRY mode. Fan speed is selected automatically in AUTO mode.
4	Compressor stops operation intermittently in Dry mode.	Compressor operation is controlled automatically in DRY mode depending on the room temperature and humidity.
5	Timer LED(ORANGE) of the indoor unit lights up and the air conditioner does not operate.	Timer is being activated and the unit is in ready mode. The unit operates normally if the timer operation is cancelled.
6	The compressor stops intermittently in a COOL mode or DRY mode, and fan speed of the indoor unit decreases.	The compressor stops intermittently or the fan speed of the indoor unit decreases to prevent inside/outside air frozen depending on the inside/outside air temperature.
7	**[In case of heat pump model]** Compressor of the outdoor unit is operating although it is turned off in a HEAT mode.	When the unit is turned off while de-ice is activated, the compressor continus operation for up to 9 minutes(maximum) until the deice is completed.
8	**[In case of heat pump model]** The compressor and indoor fan stop intermittenly in HEAT mode.	The compressor and indoor fan stop intermittently if room temperature exceeds a setting temperature in order to protect the compressor from overheated air in a HEAT mode.
9	**[In case of heat pump model]** Indoor fan and outdoor fan stop operation intermittently in a HEAT mode.	The compressor operates in a reverse cycle to remove exterior ice in a HEAT mode, and indoor fan and outdoor fan do not operate intermittently for within 20% of the total heater operation.

10-2 Communication Error

10-2-1 Communication Error

Indoor display

3-LED DISPLAY			7-SEG DISPLAY	DESCRIPTION
LED1	LED2	LED3	E101/E102	Communication error(Indoor<->outdoor)
◎	●	●		

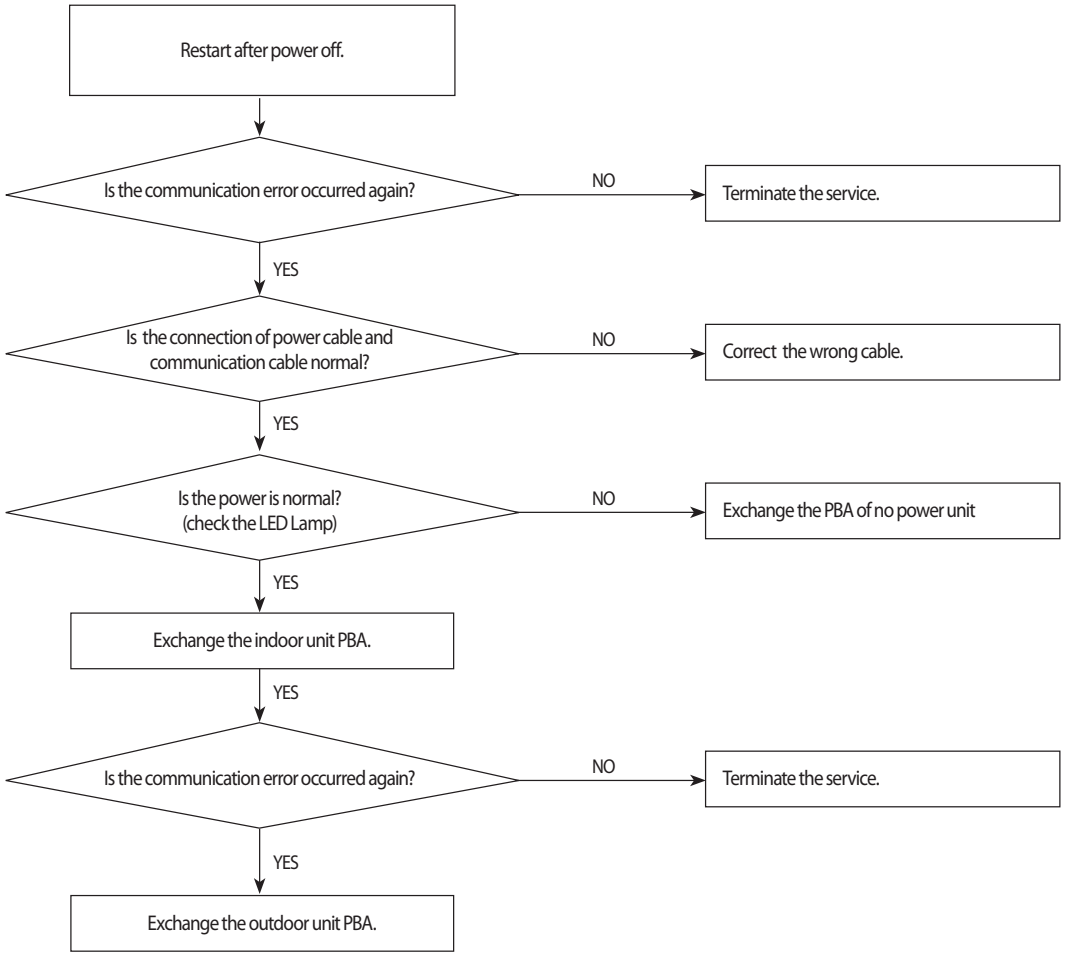
Outdoor display

◎	●	●	1min. Time out Comm.
○	○	●	Abnormal Communication
○	●	●	

● LED ON ◎ LED BLINKING ○ LED OFF

1. Checklist :
   1) Is the cable between the indoor unit and outdoor unit connected correctly?
   2) Isn't the power cable and communication cable cross?

2. Troubleshooting procedure



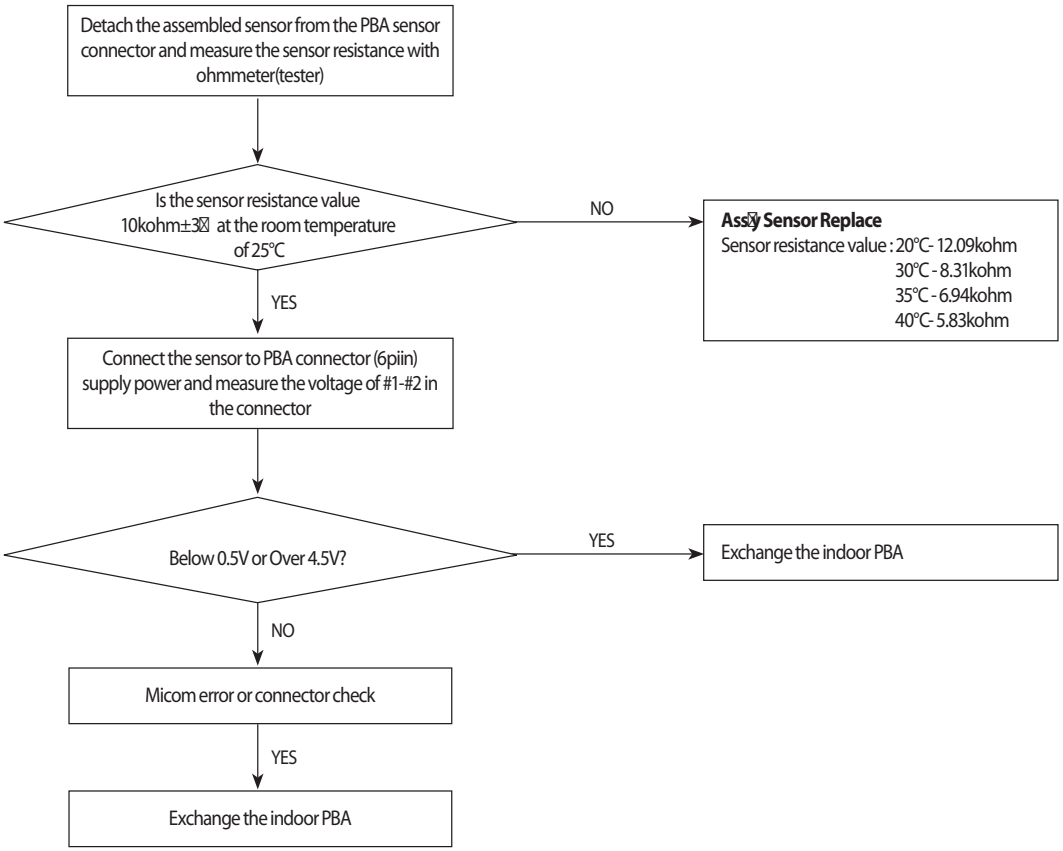
10-2-2 Indoor temperature sensor Error

Indoor display

7-SEG DISPLAY	DESCRIPTION
E121	Indoor room temp sensor error

1. Checklist :
   1) Is the indoor units temperature sensor connected correctly?
   2) Is the sensor placed correctly?
   3) Does the both terminal of sensor satisfy the resistance value in accordance with temperature?

2. Troubleshooting procedure


Detach the assembled sensor from the PBA sensor connector and measure the sensor resistance with ohmmeter(tester)
Is the sensor resistance value 10kohm±3 at the room temperature of 25℃
NO
Ass Sensor Replace
Sensor resistance value : 20℃- 12.09kohm
30℃ - 8.31kohm
35℃ - 6.94kohm
40℃- 5.83kohm
YES
Connect the sensor to PBA connector (6piin) supply power and measure the voltage of #1-#2 in the connector
Below 0.5V or Over 4.5V?
YES
Exchange the indoor PBA
NO
Micom error or connector check
YES
Exchange the indoor PBA

10-2-3 Indoor Eva-in temperature sensor error

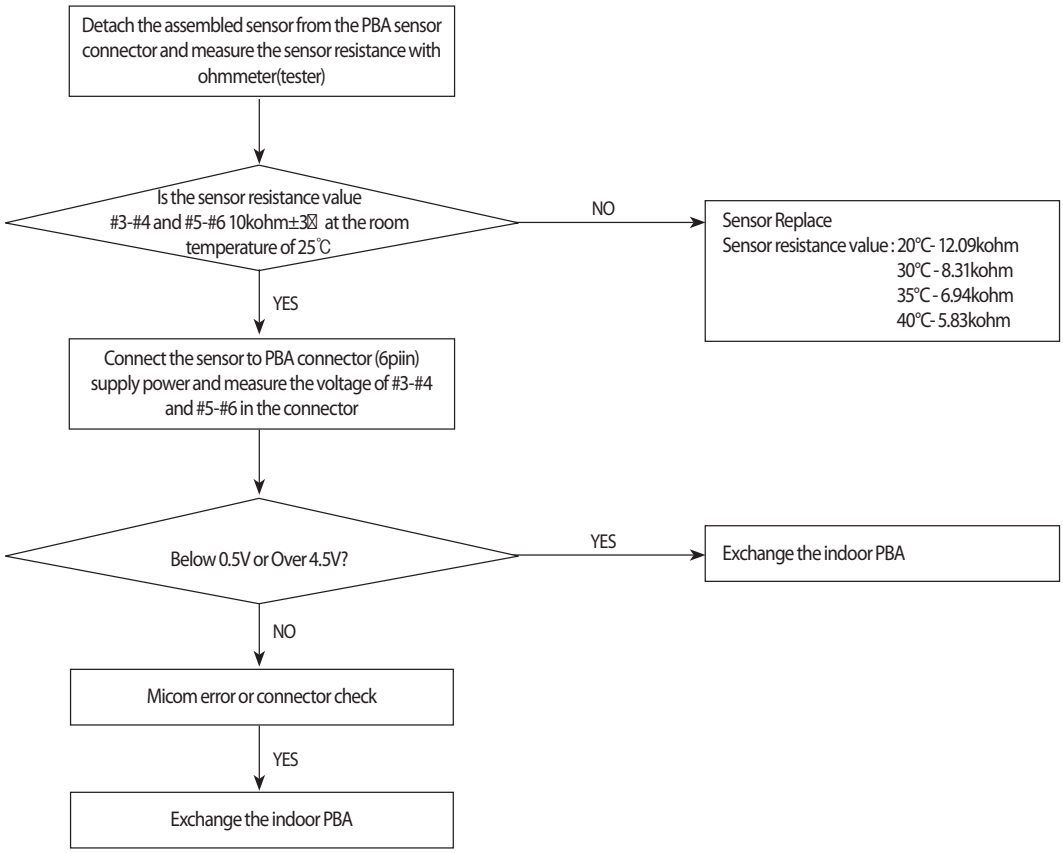
Indoor display

3-LED DISPLAY			7-SEG DISPLAY	DESCRIPTION
LED1	LED2	LED3	E122,E123	Indoor MID, Indoor IN PIPE-TH sensor error
◎	◎	○		

● LED ON ◎ LED BLINKING ○ LED OFF

1. Checklist :
   1) Is the indoor units temperature sensor connected correctly?
   2) Is the sensor placed correctly?
   3) Does the both terminal of sensor satisfy the resistance value in accordance with temperature?

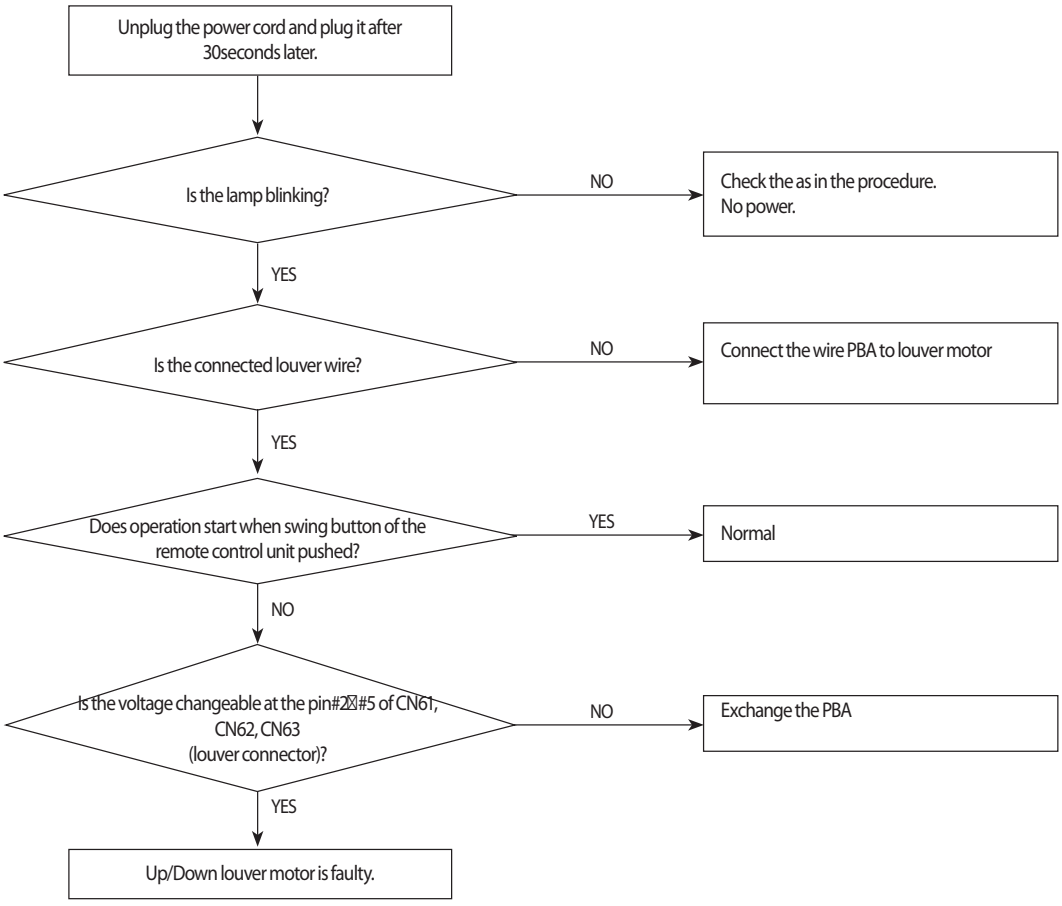
2. Troubleshooting procedure


Detach the assembled sensor from the PBA sensor connector and measure the sensor resistance with ohmmeter(tester)
Is the sensor resistance value #3-#4 and #5-#6 10kohm±3☒ at the room temperature of 25℃
NO
Sensor Replace
Sensor resistance value : 20℃- 12.09kohm
30℃ - 8.31kohm
35℃ - 6.94kohm
40℃- 5.83kohm
YES
Connect the sensor to PBA connector (6piin) supply power and measure the voltage of #3-#4 and #5-#6 in the connector
Below 0.5V or Over 4.5V?
YES
Exchange the indoor PBA
NO
Micom error or connector check
YES
Exchange the indoor PBA

10-2-4 When the Up/Down, Left/Right, Grill louver motor does not operate (Initial Diagnosis) (Not displayed)

1. Checklist :
   1) Is the input power voltage normal?
   2) Is the Up/Down louver motor properly connected with the connector? (CN61, CN62, CN63)

2. Troubleshooting procedure


Unplug the power cord and plug it after 30seconds later.
Is the lamp blinking?
NO
Check the as in the procedure.
No power.
YES
Is the connected louver wire?
NO
Connect the wire PBA to louver motor
YES
Does operation start when swing button of the remote control unit pushed?
YES
Normal
NO
Is the voltage changeable at the pin#2~#5 of CN61, CN62, CN63 (louver connector)?
NO
Exchange the PBA
YES
Up/Down louver motor is faulty.

10-2-5 Indoor fan motor speed detecting error (BLDC fan)

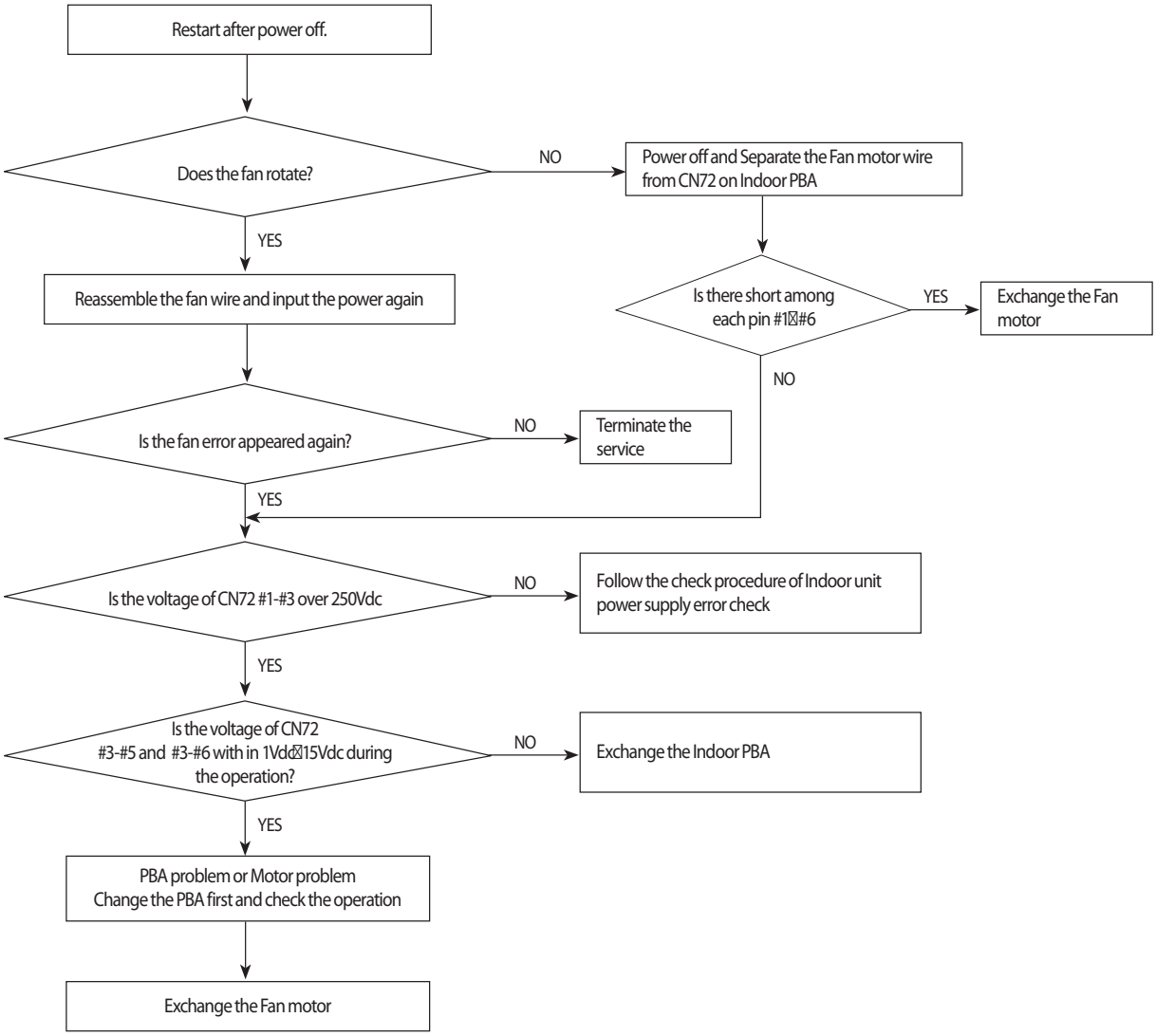
Indoor display

3-LED DISPLAY			7-SEG DISPLAY	DESCRIPTION
LED1	LED2	LED3	E154	Indoor fan error
○	○	◎		

● LED ON ◎ LED BLINKING ○ LED OFF

1. Checklist :
   1) Is the indoor units fan motor properly connected with the connector(CN72)?
   2) Is the AC voltage correct?

2. Troubleshooting procedure


Restart after power off.
Does the fan rotate?
NO
Power off and Separate the Fan motor wire from CN72 on Indoor PBA
YES
Reassemble the fan wire and input the power again
Is there short among each pin #1⊠#6
YES
Exchange the Fan motor
NO
Is the fan error appeared again?
NO
Terminate the service
YES
Is the voltage of CN72 #1-#3 over 250Vdc
NO
Follow the check procedure of Indoor unit power supply error check
YES
Is the voltage of CN72 #3-#5 and #3-#6 with in 1Vdc⊠15Vdc during the operation?
NO
Exchange the Indoor PBA
YES
PBA problem or Motor problem
Change the PBA first and check the operation
Exchange the Fan motor

10-2-6 Outdoor temperature sensor error

Indoor display

3-LED DISPLAY			7-SEG DISPLAY	DESCRIPTION
LED1	LED2	LED3	E221	Outdoor temperature sensor error
◎	○	◎		

Outdoor display

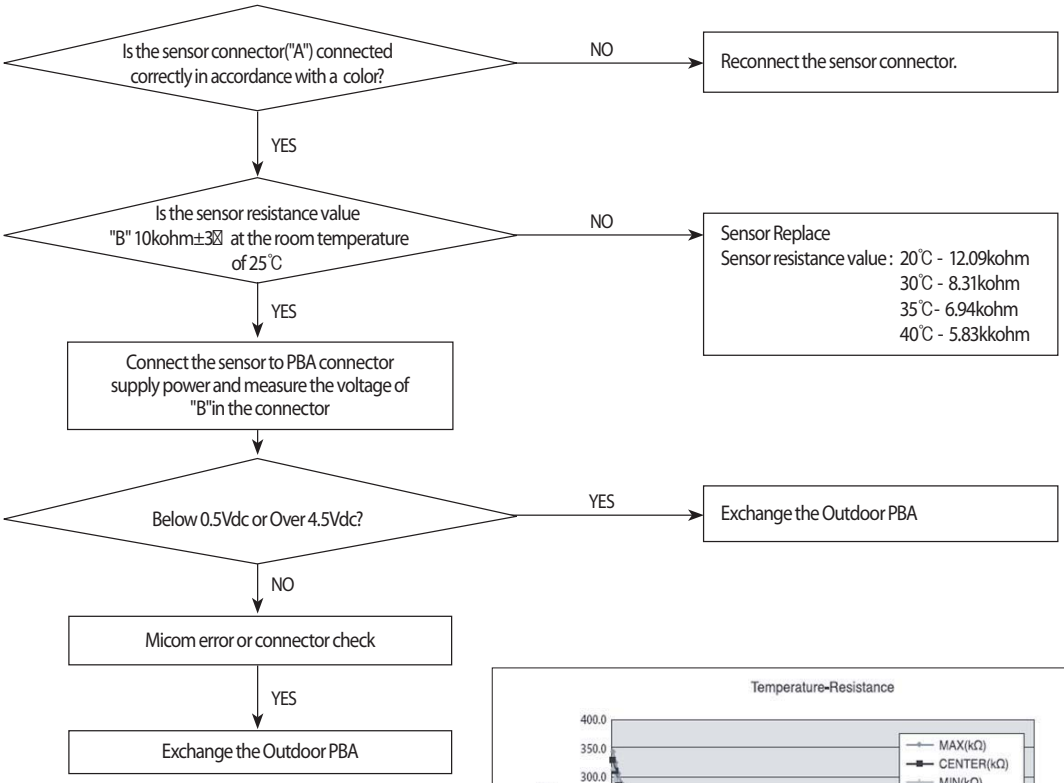
◎	○	◎	Outdoor temperature sensor error

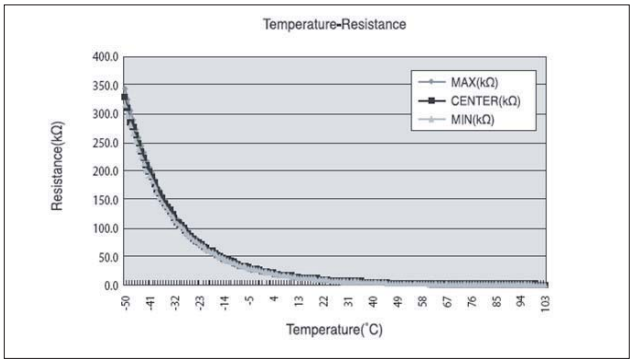
● LED ON ◎ LED BLINKING ○ LED OFF

1. Checklist :
   1) Is the sensor connected correctly?
   2) Is the sensor placed correctly?
   3) Does the both terminal of sensor satisfy the resistance value in accordance with temperature?
   4) Is the resistance value of sensor connection pull-up correct?

MODEL	"A"	"B"
AR12(09)HSFSHWK	CN251	CN251 #1-#2
AR18HSFSHWK	CN502	CN502 #1-#2
AR24HSFSHWK	CN43	CN43 #1-#2

2. Troubleshooting procedure


Is the sensor connector("A") connected correctly in accordance with a color?
NO
Reconnect the sensor connector.
YES
Is the sensor resistance value "B" 10kohm±3☒ at the room temperature of 25℃
NO
Sensor Replace
Sensor resistance value : 20℃ - 12.09kohm
30℃ - 8.31kohm
35℃- 6.94kohm
40℃ - 5.83kkohm
YES
Connect the sensor to PBA connector supply power and measure the voltage of "B"in the connector
Below 0.5Vdc or Over 4.5Vdc?
YES
Exchange the Outdoor PBA
NO
Micom error or connector check
YES
Exchange the Outdoor PBA



10-2-7 Outdoor Coil temperature sensor error

Indoor display

3-LED DISPLAY			7-SEG DISPLAY	DESCRIPTION
LED1	LED2	LED3	E231	Outdoor Cond temperature sensor error
◎	○	◎		

Outdoor display

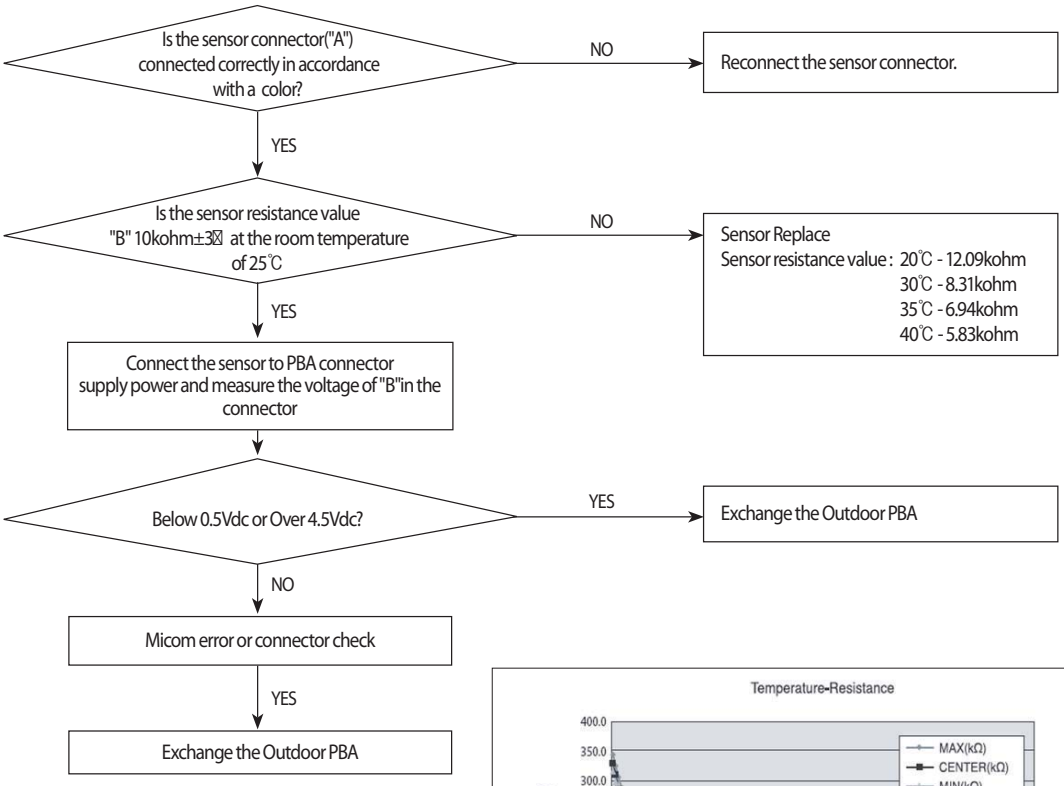
◎	●	◎	Outdoor Cond temperature sensor error

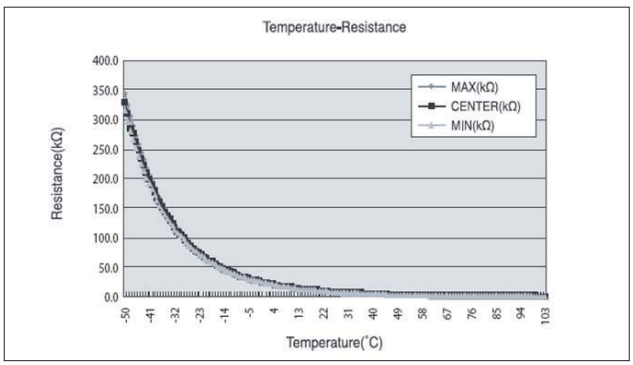
● LED ON ◎ LED BLINKING ○ LED OFF

1. Checklist :
   1) Is the sensor connected correctly?
   2) Is the sensor placed correctly?
   3) Does the both terminal of sensor satisfy the resistance value in accordance with temperature?
   4) Is the resistance value of sensor connection pull-up correct?

MODEL	"A"	"B"
AR12(09)HSFSHWK	CN251	CN251 #5-#6
AR18HSFSHWK	CN501	CN501 #3-#4
AR24HSFSHWK	CN43	CN43 #3-#4

2. Troubleshooting procedure


Is the sensor connector("A") connected correctly in accordance with a color?
NO
Reconnect the sensor connector.
YES
Is the sensor resistance value "B" 10kohm±3☒ at the room temperature of 25℃
NO
Sensor Replace
Sensor resistance value : 20℃ - 12.09kohm
30℃ - 8.31kohm
35℃ - 6.94kohm
40℃ - 5.83kohm
YES
Connect the sensor to PBA connector supply power and measure the voltage of "B"in the connector
Below 0.5Vdc or Over 4.5Vdc?
YES
Exchange the Outdoor PBA
NO
Micom error or connector check
YES
Exchange the Outdoor PBA



10-2-8 Outdoor Discharge temperature sensor error

Indoor display

3-LED DISPLAY			7-SEG DISPLAY	DESCRIPTION
LED1	LED2	LED3	E251	Outdoor Discharge temperature sensor error
◎	○	◎		

Outdoor display

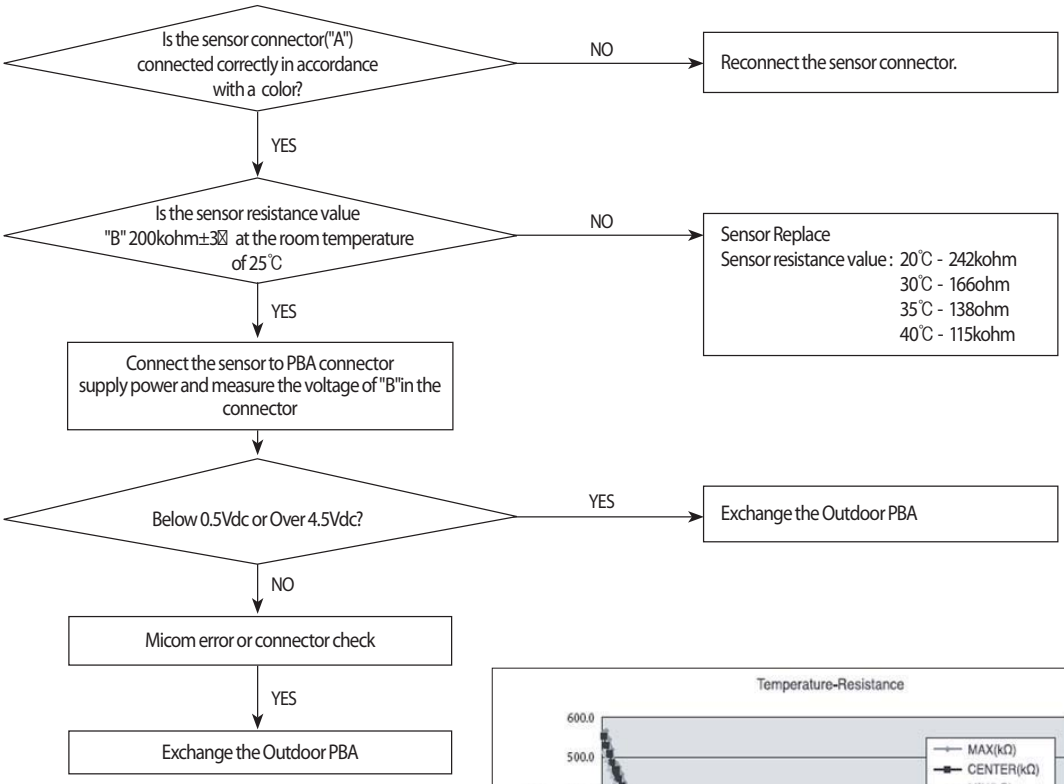
◎	◎	○	Outdoor Discharge temperature sensor error

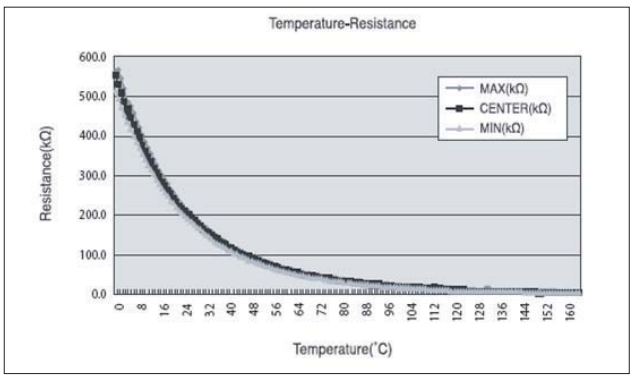
● LED ON ◎ LED BLINKING ○ LED OFF

1. Checklist :
   1) Is the sensor connected correctly?
   2) Is the sensor placed correctly?
   3) Does the both terminal of sensor satisfy the resistance value in accordance with temperature?
   4) Is the resistance value of sensor connection pull-up correct?

MODEL	"A"	"B"
AR12(09)HSFSHWK	CN251	CN251 #3-#4
AR18HSFSHWK	CN502	CN502 #3-#4
AR24HSFSHWK	CN43	CN43 #5-#6

2. Troubleshooting procedure


Is the sensor connector("A") connected correctly in accordance with a color?
NO
Reconnect the sensor connector.
YES
Is the sensor resistance value "B" 200kohm±3% at the room temperature of 25℃
NO
Sensor Replace
Sensor resistance value : 20℃ - 242kohm
30℃ - 166ohm
35℃ - 138ohm
40℃ - 115kohm
YES
Connect the sensor to PBA connector supply power and measure the voltage of "B"in the connector
Below 0.5Vdc or Over 4.5Vdc?
YES
Exchange the Outdoor PBA
NO
Micom error or connector check
YES
Exchange the Outdoor PBA



10-2-9 Outdoor Discharge over temperature error

Indoor display

3-LED DISPLAY			7-SEG DISPLAY	DESCRIPTION
LED1	LED2	LED3	E416	Outdoor Discharge over temperature error
◎	○	◎		

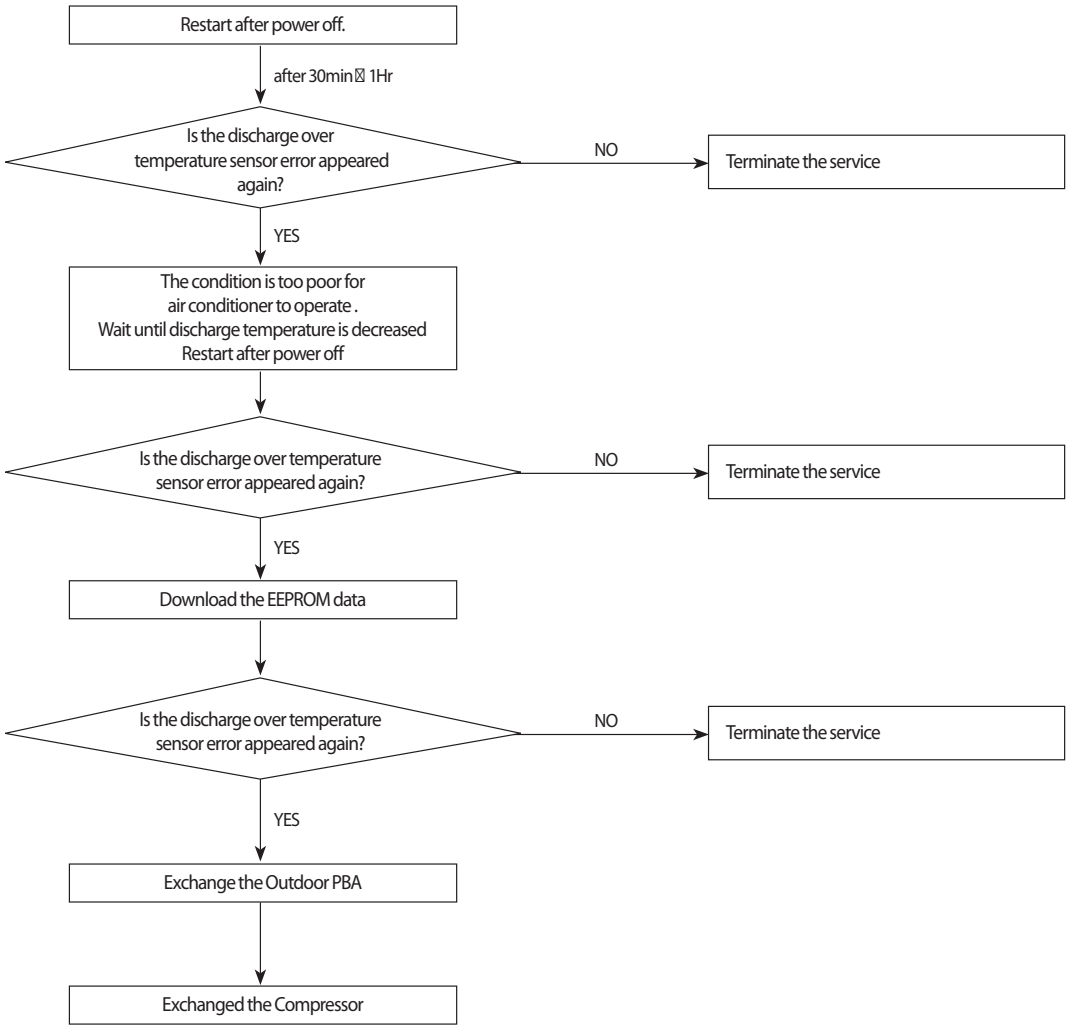
Outdoor display

◎	◎	●	Outdoor Discharge over temperature error

● LED ON ◎ LED BLINKING ○ LED OFF

1. Checklist :
   1) Check the discharge temperature in the outdoor unit
   2) Check the compressor locking or gas leak
   3) Download the EEPROM data

2. Troubleshooting procedure


Restart after power off.
after 30min ~ 1Hr
Is the discharge over temperature sensor error appeared again?
NO
Terminate the service
YES
The condition is too poor for air conditioner to operate .
Wait until discharge temperature is decreased
Restart after power off
Is the discharge over temperature sensor error appeared again?
NO
Terminate the service
YES
Download the EEPROM data
Is the discharge over temperature sensor error appeared again?
NO
Terminate the service
YES
Exchange the Outdoor PBA
Exchanged the Compressor

10-2-10 Outdoor Fan motor error

Indoor display

3-LED DISPLAY			7-SEG DISPLAY	DESCRIPTION
LED1	LED2	LED3	E458	Outdoor fan error
◎	○	◎		

Outdoor display

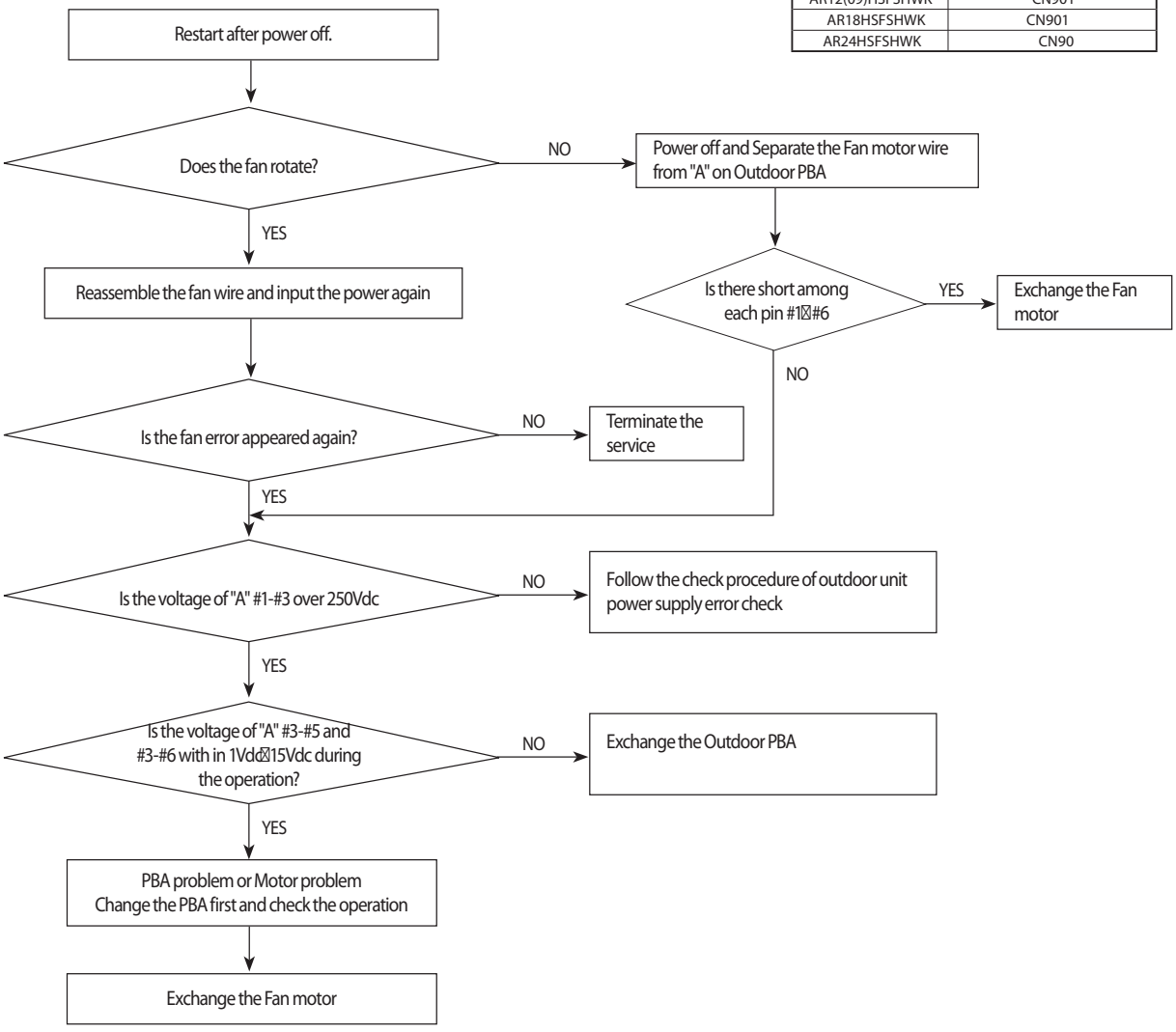
●	○	○	Outdoor fan error

● LED ON ◎ LED BLINKING ○ LED OFF

1. Checklist :
   1) Are the input power voltage and the power connection correct?
   2) Is the motor wire connected to the outdoor PBA correctly?
   3) Is there no assembly error or non-assembly in the terminal of motor wire connector?
   4) Is there no obstacle at the surrounding of motor and propeller?

2. Troubleshooting procedure

MODEL	"A"
AR12(09)HSFSHWK	CN901
AR18HSFSHWK	CN901
AR24HSFSHWK	CN90


Restart after power off.
Does the fan rotate?
NO
Power off and Separate the Fan motor wire from "A" on Outdoor PBA
YES
Reassemble the fan wire and input the power again
Is there short among each pin #1~#6
YES
Exchange the Fan motor
NO
Is the fan error appeared again?
NO
Terminate the service
YES
Is the voltage of "A" #1-#3 over 250Vdc
NO
Follow the check procedure of outdoor unit power supply error check
YES
Is the voltage of "A" #3-#5 and #3-#6 with in 1Vdc~15Vdc during the operation?
NO
Exchange the Outdoor PBA
YES
PBA problem or Motor problem
Change the PBA first and check the operation
Exchange the Fan motor

10-2-11 Compressor starting error

Indoor display

3-LED DISPLAY			7-SEG DISPLAY	DESCRIPTION
LED1	LED2	LED3	E461	Comp starting error
◎	○	◎		

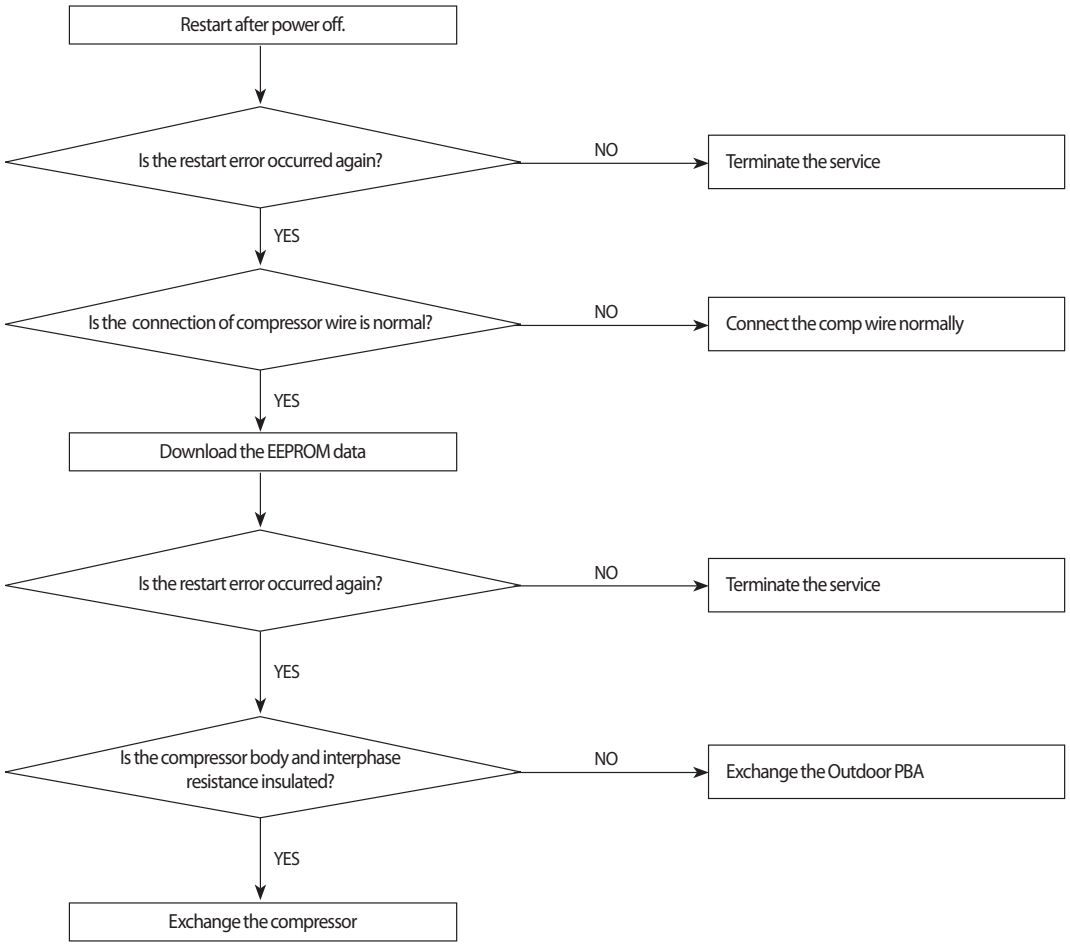
Outdoor display

○	◎	○	Comp starting error

● LED ON ◎ LED BLINKING ○ LED OFF

1. Checklist :
   1) Is the connection of cable for the compressor?
   2) Is the compressor wire is connected clockwise? U(RED)-V(BLU)-W(YEL)
   3) Is the interphase resistance of compressor normal?

2. Troubleshooting procedure



10-2-12 Compressor wire missing error/rotation error

Indoor display

3-LED DISPLAY			7-SEG DISPLAY	DESCRIPTION
LED1	LED2	LED3	E467	Compressor wire missing errorr/rotation error
◎	○	◎		

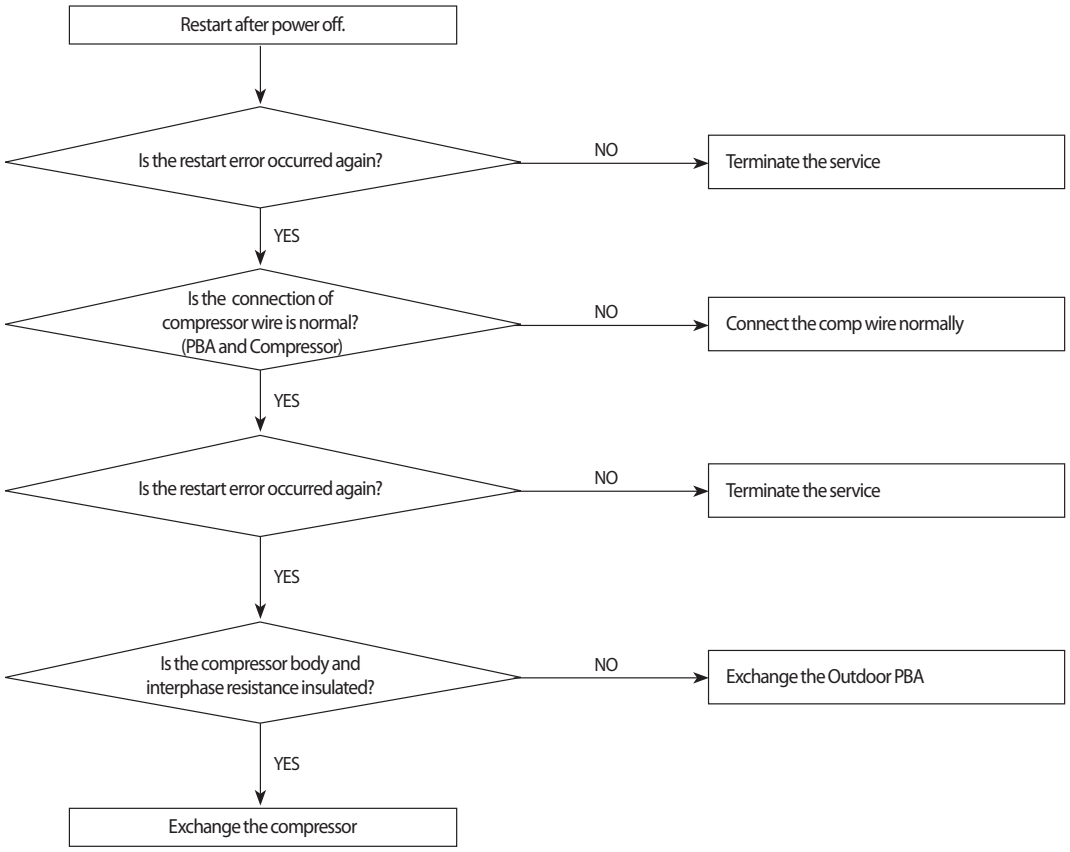
Outdoor display

●	○	●	Compressor wire missing error/rotation error

● LED ON ◎ LED BLINKING ○ LED OFF

1. Checklist :
   1) Is the connection of cable for the compressor?
   2) Is the compressor wire is connected clockwise? U(RED)-V(BLU)-W(YEL)
   3) Is the interphase resistance of compressor normal?

2. Troubleshooting procedure



10-2-13 O.C(Over Current) error

Indoor display

3-LED DISPLAY			7-SEG DISPLAY	DESCRIPTION
LED1	LED2	LED3	E464	IPM Over Current(O.C) Error
◎	○	◎		

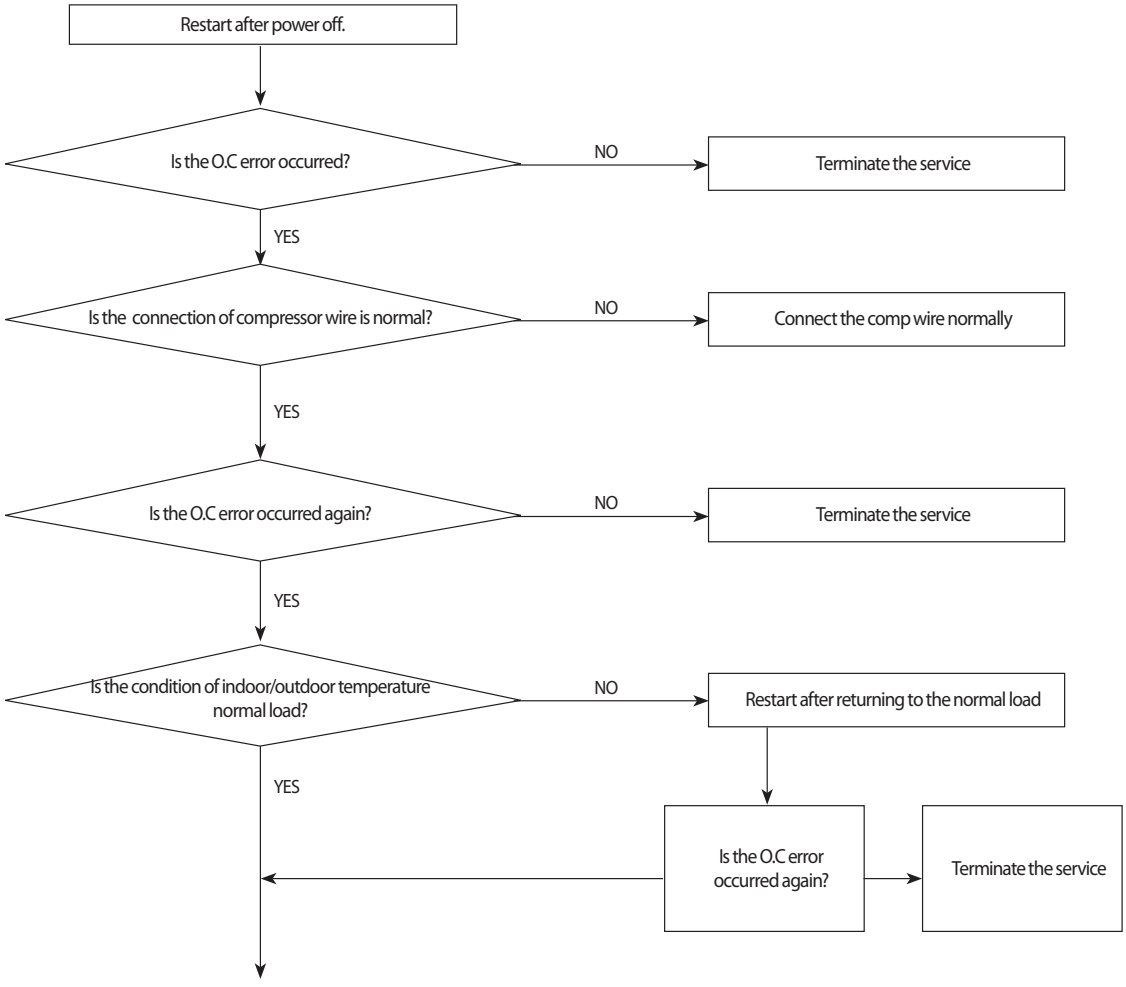
Outdoor display

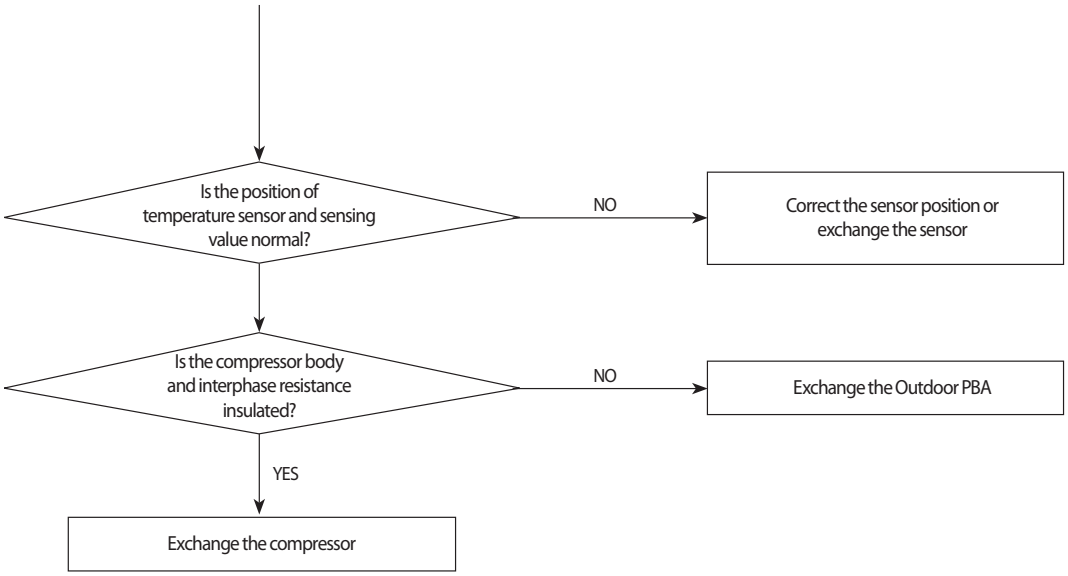
○	○	◎	IPM Over Current(O.C) Error

● LED ON ◎ LED BLINKING ○ LED OFF

1. Checklist :
   1) Is the IPM Shunt resistance value correct? Check the resistor is opened
   2) Is the condition of surrounding temperature abnormal overload?
   3) Is there any problem as like the temperature sensor separation or measurement value error?
   4) Is the interphase resistance of compressor normal?

2. Troubleshooting procedure




Is the position of temperature sensor and sensing value normal?
NO
Correct the sensor position or exchange the sensor
Is the compressor body and interphase resistance insulated?
NO
Exchange the Outdoor PBA
YES
Exchange the compressor

10-2-14 DC_link voltage sensor error

Indoor display

3-LED DISPLAY			7-SEG DISPLAY	DESCRIPTION
LED1	LED2	LED3	E469	DC_link voltage sensor error
◎	○	◎		

Outdoor display

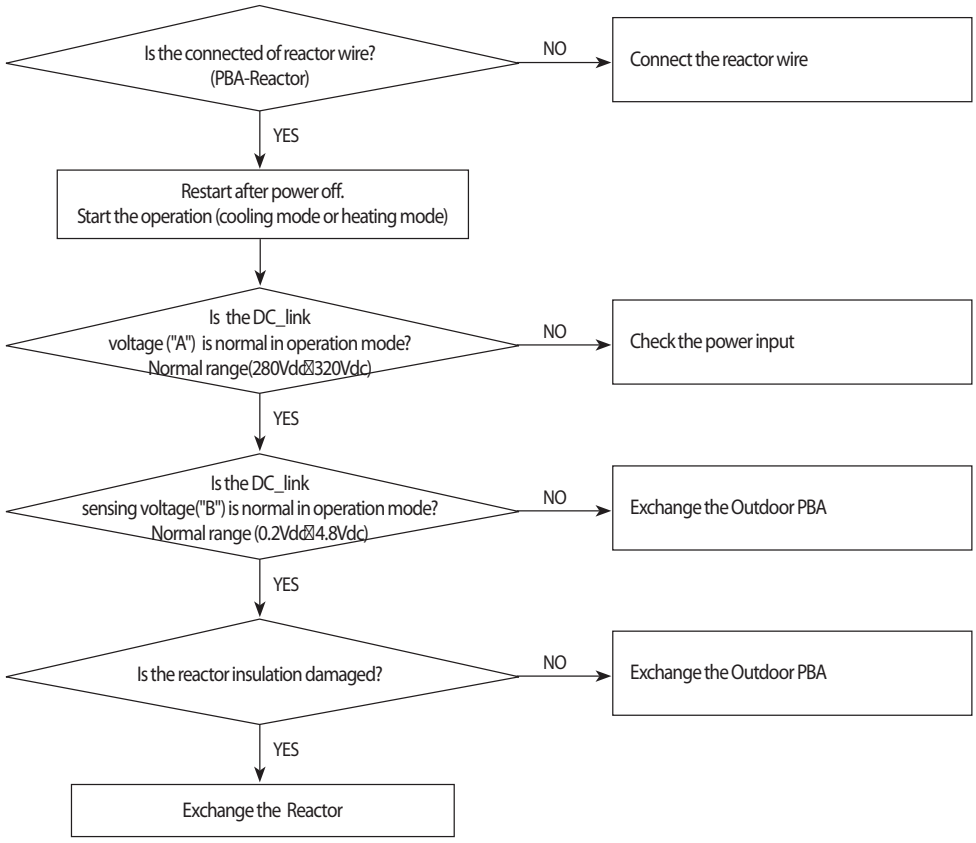
●	◎	◎	DC_link voltage sensor error

● LED ON ◎ LED BLINKING ○ LED OFF

1. Checklist :
   1) Is the input voltage of outdoor terminal block is normal?
   2) Is the reactor wire connected?
   3) Is the DC_link capacitor("A") assembled in accordance the specification? (Outdoor PBA)
   4) Is the DC_link resistor("B") value is normal? (Outdoor PBA)

2. Troubleshooting procedure

MODEL	"A"	"B"
AR12(09)HSFSHWK	CE101,CE102,CE103	R410,R411,R412
AR18HSFSHWK	CE001,CE002,CE003,CE004	R413,R414,R415
AR24HSFSHWK	C141,C142,C143,C144	"-"



10-2-15 DC_link voltage sensor error

Indoor display

3-LED DISPLAY			7-SEG DISPLAY	DESCRIPTION
LED1	LED2	LED3	E488	AC Input Voltage Sensor Error
◎	○	◎		

Outdoor display

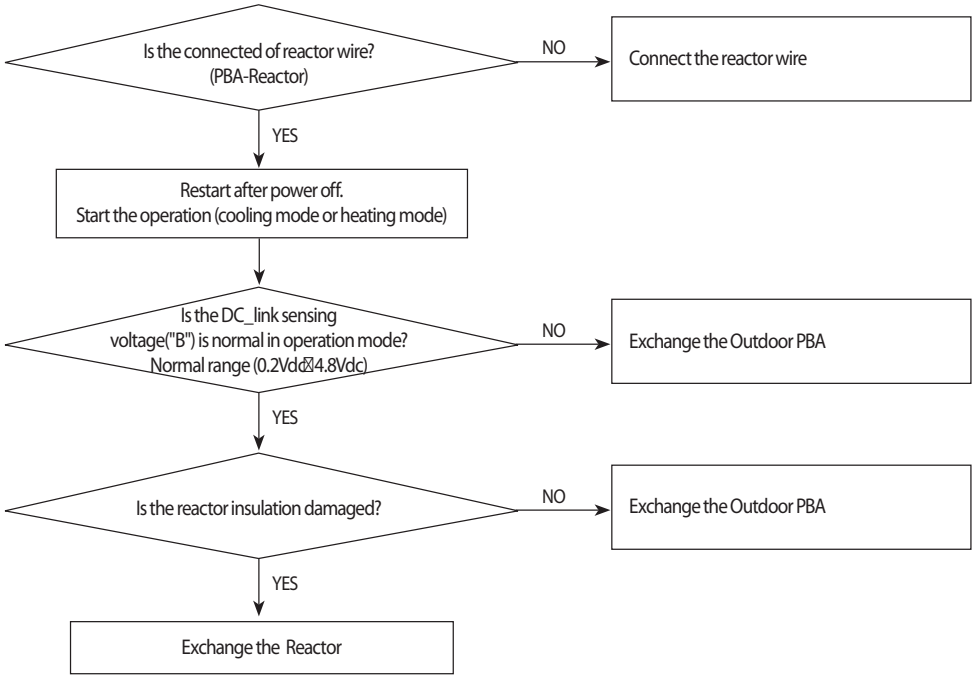
●	◎	◎	AC Input Voltage Sensor Error

● LED ON ◎ LED BLINKING ○ LED OFF

1. Checklist :
   1) Is the input voltage of outdoor terminal block is normal?
   2) Is the reactor wire connected?
   3) Is the PFC resistor("A") value is normal? (Outdoor PBA)

2. Troubleshooting procedure

MODEL	"A"	"B"
AR12(09)HSFSHWK	R105,R106,R107,R108	R105



10-2-16 DC_link voltage under/over error, H/W DC-link Over voltage protection error/PFC over load

Indoor display

3-LED DISPLAY			7-SEG DISPLAY	DESCRIPTION
LED1	LED2	LED3	E466	DC-Link voltage under/over error
◎	○	◎	E483	Over Voltage Protection Error
			E484	PFC over load

Outdoor display

○	●	◎	DC-Link voltage under/over error
			PFC over load
			Over Voltage Protection Erro

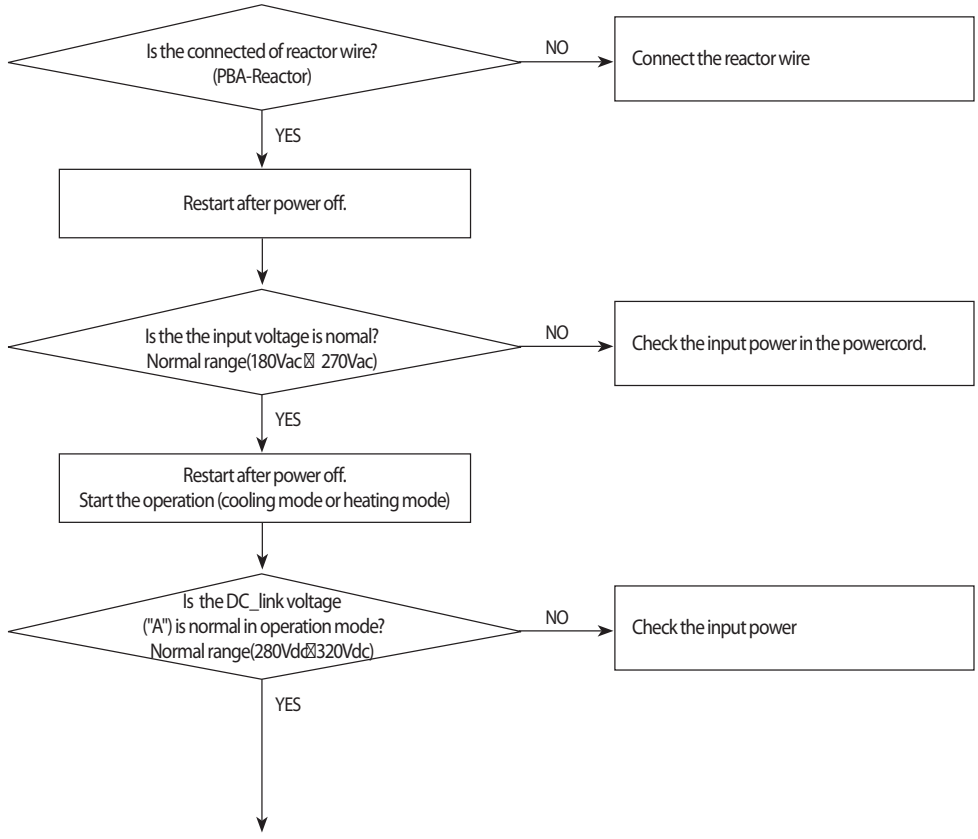
● LED ON ◎ LED BLINKING ○ LED OFF

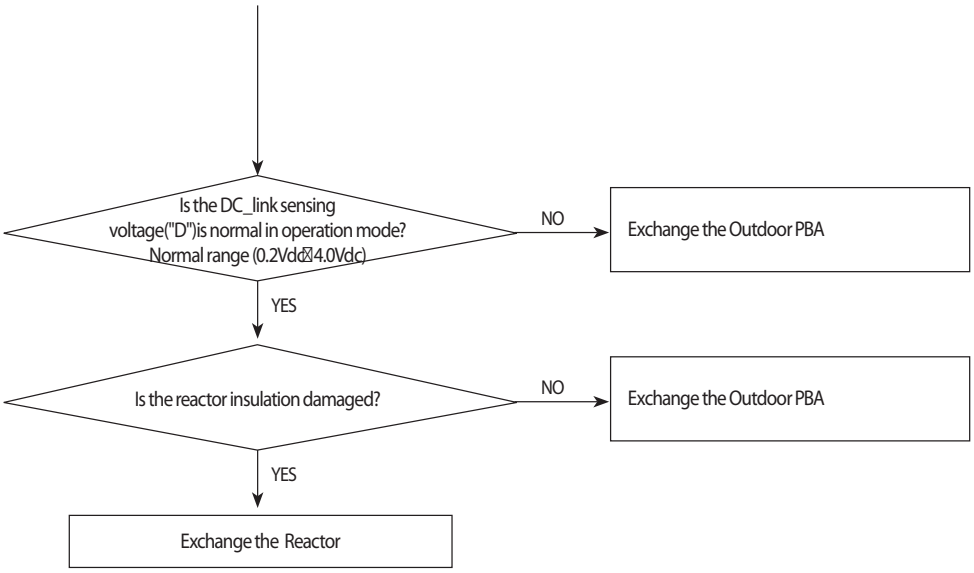
1. Checklist :
   1) Is the input voltage of outdoor terminal block is normal?
   2) Is the input voltage is higher than 300Vac?
   3) Is the reactor wire connected?
   4) Is the DC_link capacitor(A") assembled in accordance the specification? (Outdoor PBA)
   5) Is the DC_link resistor("B") value is normal? (Outdoor PBA)
   6) Is the PFC resistor("C") value is normal? (Outdoor PBA)

MODEL	"A"	"B"
AR12(09)HSFSHWK	CE101,CE102,CE103	R101,R102,R103,R104
AR18HSFSHWK	CE001,CE002,CE003,CE004	R004,R005,R006,R007
AR24HSFSHWK	C141,C142,C143,C144	R141-R147

MODEL	"C"	"D"
AR12(09)HSFSHWK	R105,R106,R107,R108	R101,R105
AR18HSFSHWK	"-"	R004
AR24HSFSHWK	"-"	R146

2. Troubleshooting procedure




Is the DC_link sensing
voltage("D")is normal in operation mode?
Normal range (0.2Vdc~4.0Vdc)
NO
Exchange the Outdoor PBA
YES
Is the reactor insulation damaged?
NO
Exchange the Outdoor PBA
YES
Exchange the Reactor

10-2-17 I_trip error, PFC over current

Indoor display

3-LED DISPLAY			7-SEG DISPLAY	DESCRIPTION
LED1	LED2	LED3	E462	AC Input I_Limit Trip Error
◎	○	◎		

Outdoor display

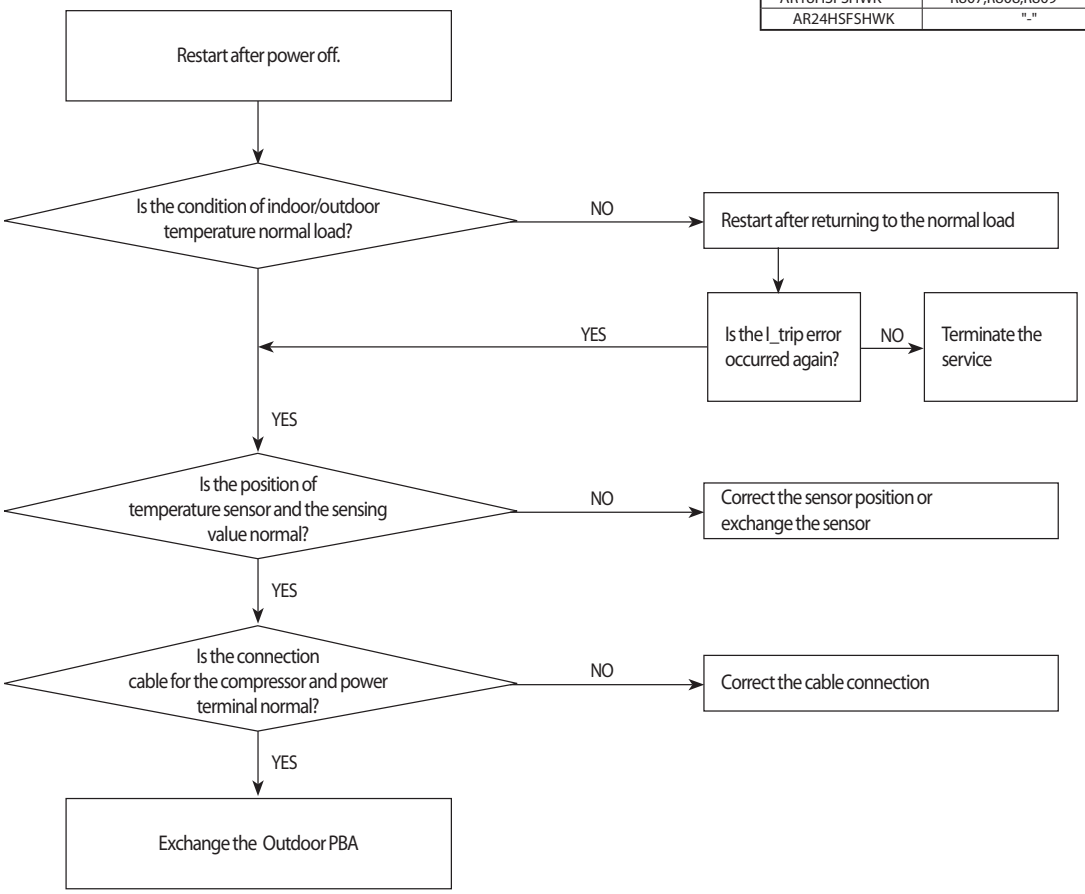
●	◎	●	AC Input I_Limit Trip Error

● LED ON ◎ LED BLINKING ○ LED OFF

1. Checklist :
   1) Is the PFC Shunt("A") resistance value correct? Check the resistor is opened
   2) Is the condition of surrounding temperature abnormal overload?
   3) Is there any problem as like the temperature sensor separation or measurement value error?
   4) Is the interphase resistance of compressor normal?

2. Troubleshooting procedure

MODEL	"A"
AR12(09)HSFSHWK	R425,R426
AR18HSFSHWK	R807,R808,R809
AR24HSFSHWK	"-"


Restart after power off.
Is the condition of indoor/outdoor temperature normal load?
NO
Restart after returning to the normal load
Is the I_trip error occurred again?
YES
NO
Terminate the service
YES
Is the position of temperature sensor and the sensing value normal?
NO
Correct the sensor position or exchange the sensor
YES
Is the connection cable for the compressor and power terminal normal?
NO
Correct the cable connection
YES
Exchange the Outdoor PBA

10-2-18 Current sensor error/Input current sensor error

Indoor display

3-LED DISPLAY			7-SEG DISPLAY	DESCRIPTION
LED1	LED2	LED3		
◎	○	◎	E462	AC Input I_Limit Trip Error

Outdoor display

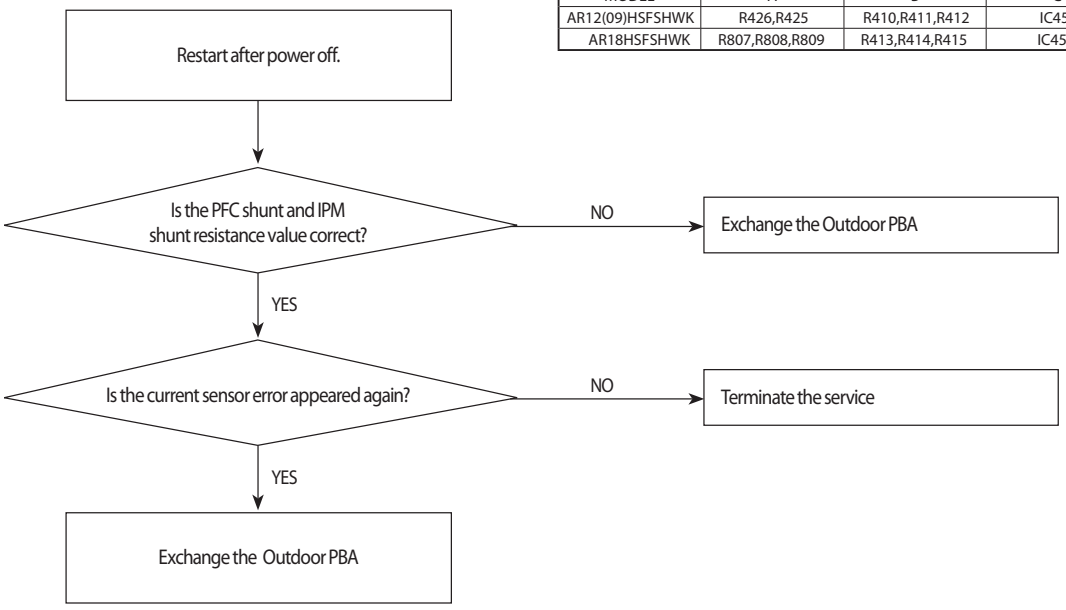
◎	◎	●	Current sensor error
			Input current sensor error

● LED ON ◎ LED BLINKING ○ LED OFF

1. Checklist :
   1) Is the PFC Shunt("A") resistance value correct? Check the resistor is opened
   2) Is the IPM Shunt("B") resistance value correct? Check the resistor is opened
   3) Is there no short or open around "C"?

2. Troubleshooting procedure

MODEL	"A"	"B"	"C"
AR12(09)HSFSHWK	R426,R425	R410,R411,R412	IC451
AR18HSFSHWK	R807,R808,R809	R413,R414,R415	IC451



10-2-19 Heatsink sensor error/Heatsink over heat

Indoor display

3-LED DISPLAY			7-SEG DISPLAY	DESCRIPTION
LED1	LED2	LED3		
◎	○	◎	E474	Heatsink sensor error
			E500	Heatsink Over Temperature Error

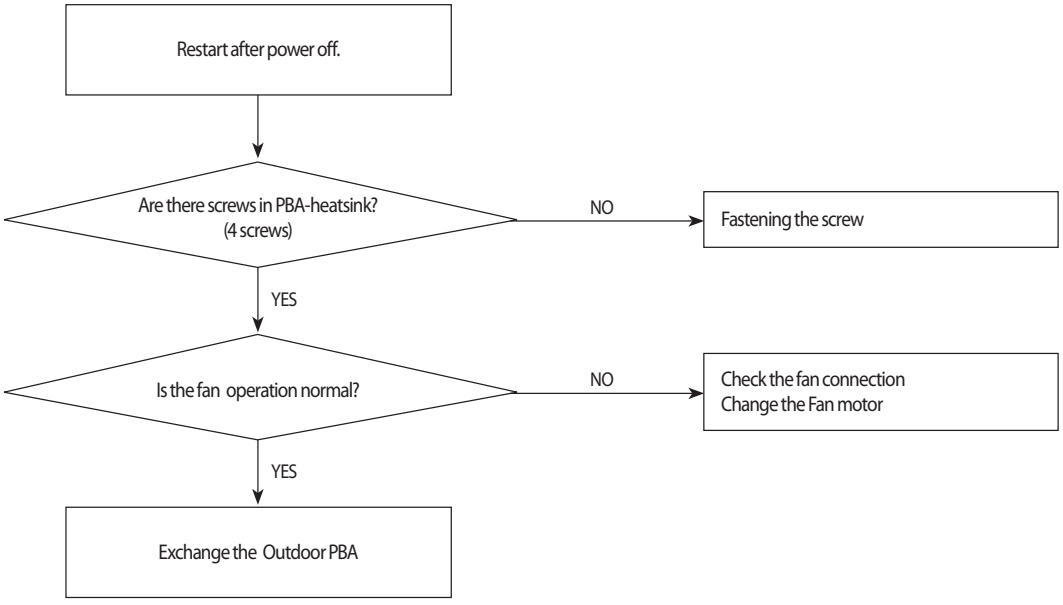
Outdoor display

◎	◎	●	Heatsink sensor error
◎	●	○	Heatsink Over Temperature Error

● LED ON ◎ LED BLINKING ○ LED OFF

1. Checklist :
   1) Are there screws assembly in PBA-heatsink?
   2) Is the gap PBA-heatsink
   3) Is the fan operation normal?
   4) Is the cover assembly in control-box normal?

2. Troubleshooting procedure



10-2-20 Comp Vlimit error

Indoor display

3-LED DISPLAY			7-SEG DISPLAY	DESCRIPTION
LED1	LED2	LED3		
◎	○	◎	E465	Comp V_limit/I_limit Error

Outdoor display

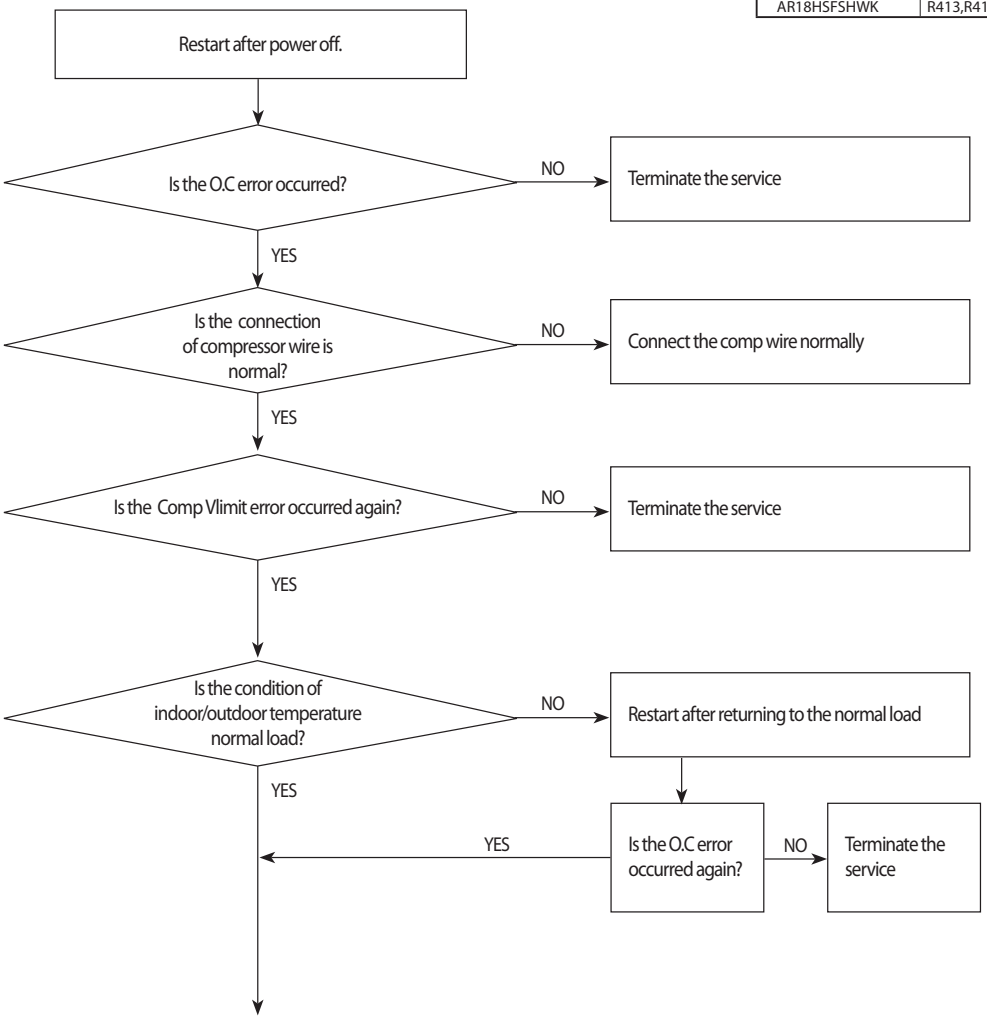
◎	●	○	Comp V_limit/I_limit Error

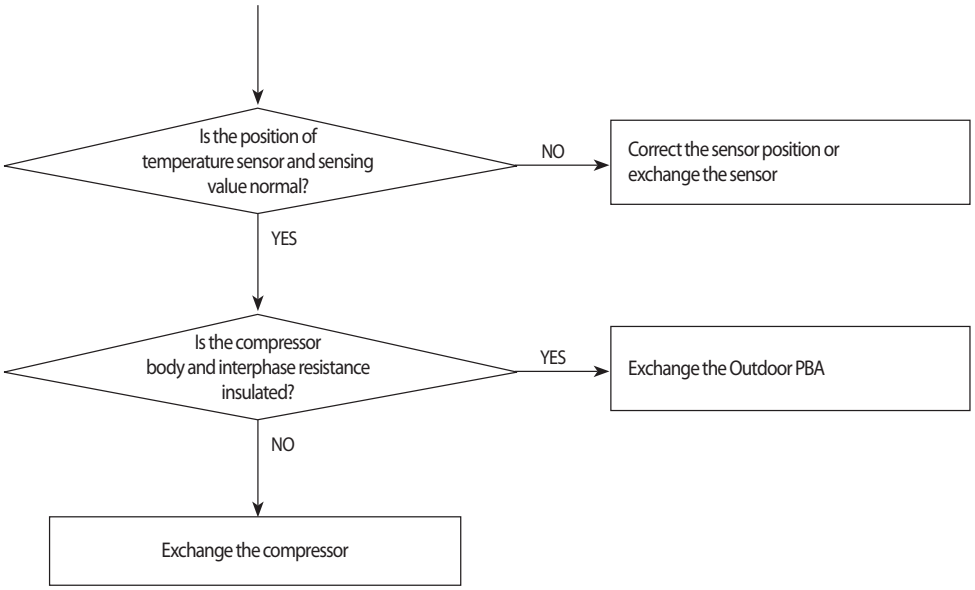
● LED ON ◎ LED BLINKING ○ LED OFF

1. Checklist :
   1) Is the IPM Shunt("A") resistance value correct? Check the resistor is opened
   2) Is the condition of surrounding temperature abnormal overload?
   3) Is there any problem as like the temperature sensor separation or measurement value error?
   4) Is the interphase resistance of compressor normal?

2. Troubleshooting procedure

MODEL	"A"
AR12(09)HSFSHWK	R410,R411,R412
AR18HSFSHWK	R413,R414,R415




Is the position of temperature sensor and sensing value normal?
NO
Correct the sensor position or exchange the sensor
YES
Is the compressor body and interphase resistance insulated?
YES
Exchange the Outdoor PBA
NO
Exchange the compressor

10-2-21 EEPROM error/OTP error

Indoor display

3-LED DISPLAY			7-SEG DISPLAY	DESCRIPTION
LED1	LED2	LED3		
◎	○	◎	E470	EEPROM Data Error (no data)
			E471	OTP errorEEPROM Data Error (Main Micom↔Inv Micom)

Outdoor display

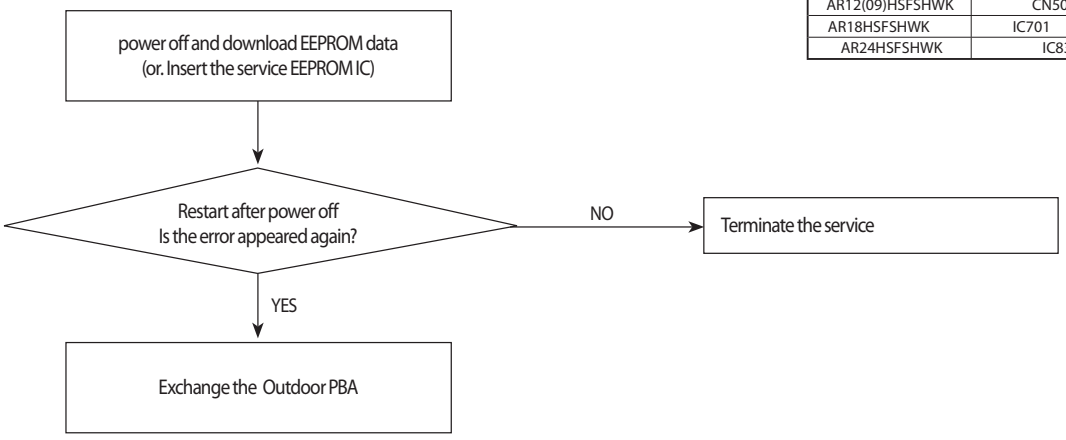
○	●	○	EEPROM Data Error (no data)
●	○	◎	OTP errorEEPROM Data Error (Main Micom↔Inv Micom)

● LED ON ◎ LED BLINKING ○ LED OFF

1. Checklist :
   1) Is there a short around micom?
   2) Is there a short around "A"?
   3) Did you download or insert EEPROM IC, after changing outdoor PBA?

2. Troubleshooting procedure

MODEL	"A"
AR12(09)HSFSHWK	CN501
AR18HSFSHWK	IC701
AR24HSFSHWK	IC83



10-2-22 Operation condition secession error

Indoor display

3-LED DISPLAY			7-SEG DISPLAY	DESCRIPTION
LED1	LED2	LED3		
◎	○	◎	E440	Prohibit Operation Condition Error (Heating)
			E441	Prohibit Operation Condition Error (Cooling)

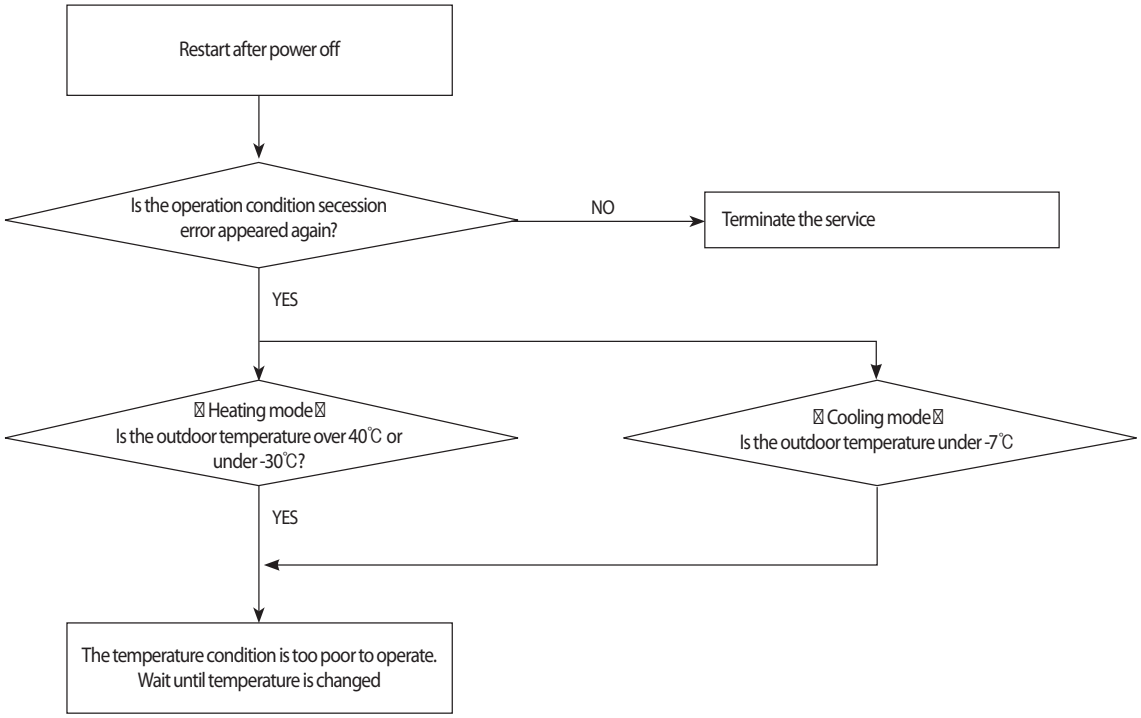
Outdoor display

●	◎	○	Operation condition secession

● LED ON ◎ LED BLINKING ○ LED OFF

1. Checklist :
   1) Check the temperature around the outdoor unit.

2. Troubleshooting procedure


Restart after power off
Is the operation condition secession error appeared again?
NO
Terminate the service
YES
Heating mode
Is the outdoor temperature over 40℃ or under -30℃?
Cooling mode
Is the outdoor temperature under -7℃
YES
The temperature condition is too poor to operate. Wait until temperature is changed

10-2-23 Gas leak error

Indoor display

3-LED DISPLAY			7-SEG DISPLAY	DESCRIPTION
LED1	LED2	LED3		
◎	○	◎	E554	GAS Leak error

Outdoor display

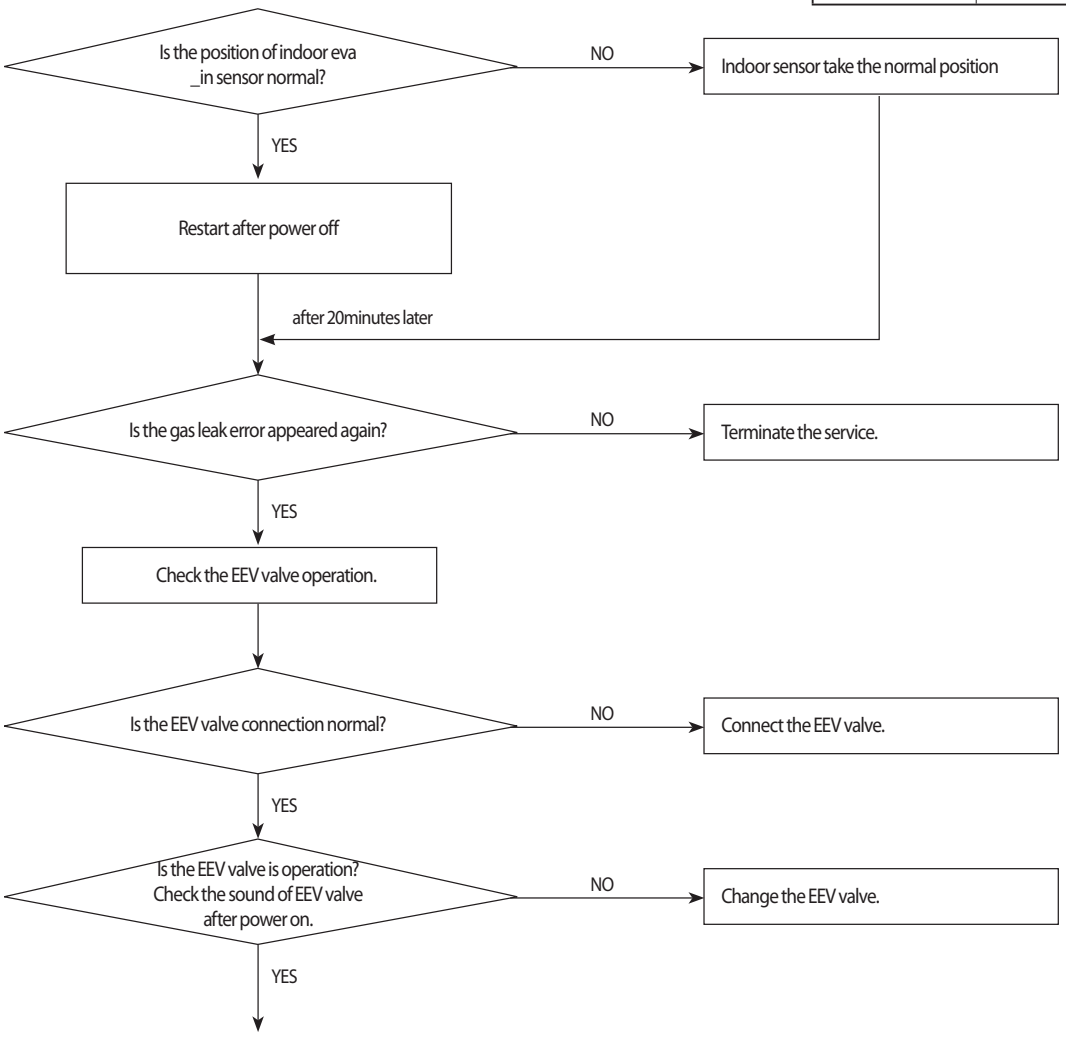
●	●	○	GAS Leak error

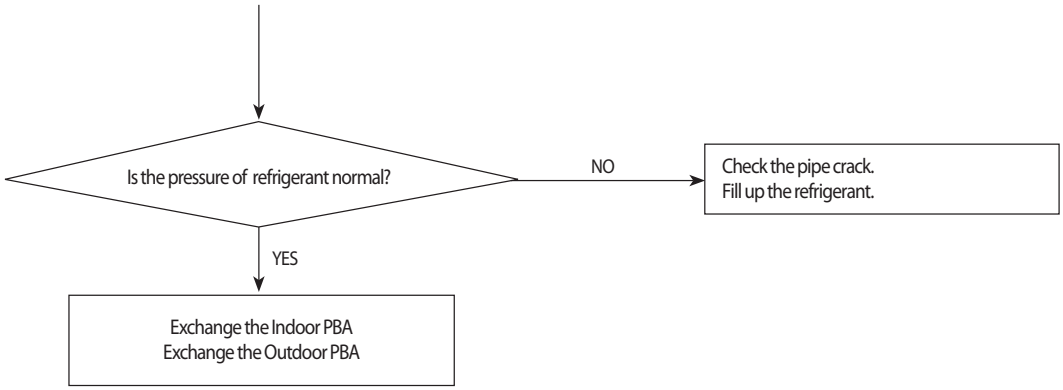
● LED ON ◎ LED BLINKING ○ LED OFF

1. Checklist :
   1) Is the position of indoor Eva_in sensor normal?
   2) Check the pipe crack
   3) Check the EEV valve connection("A") in Outdoor unit
   4) Check the refrigerant was charged

2. Troubleshooting procedure

MODEL	"A"
AR12(09HSFSHWK	CN701
AR18HSFSHWK	CN503
AR24HSFSHWK	CN81



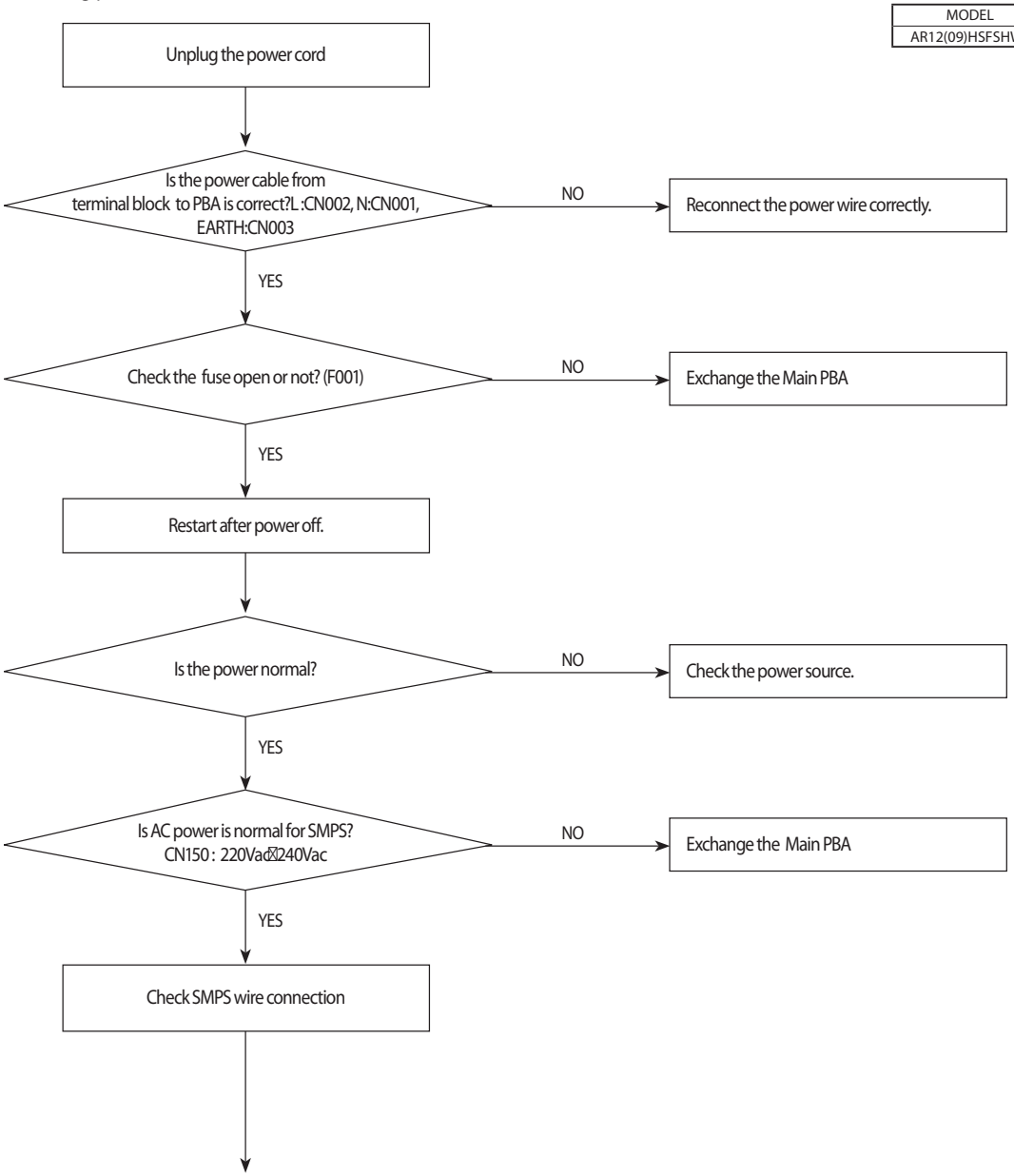

Is the pressure of refrigerant normal?
NO
Check the pipe crack.
Fill up the refrigerant.
YES
Exchange the Indoor PBA
Exchange the Outdoor PBA

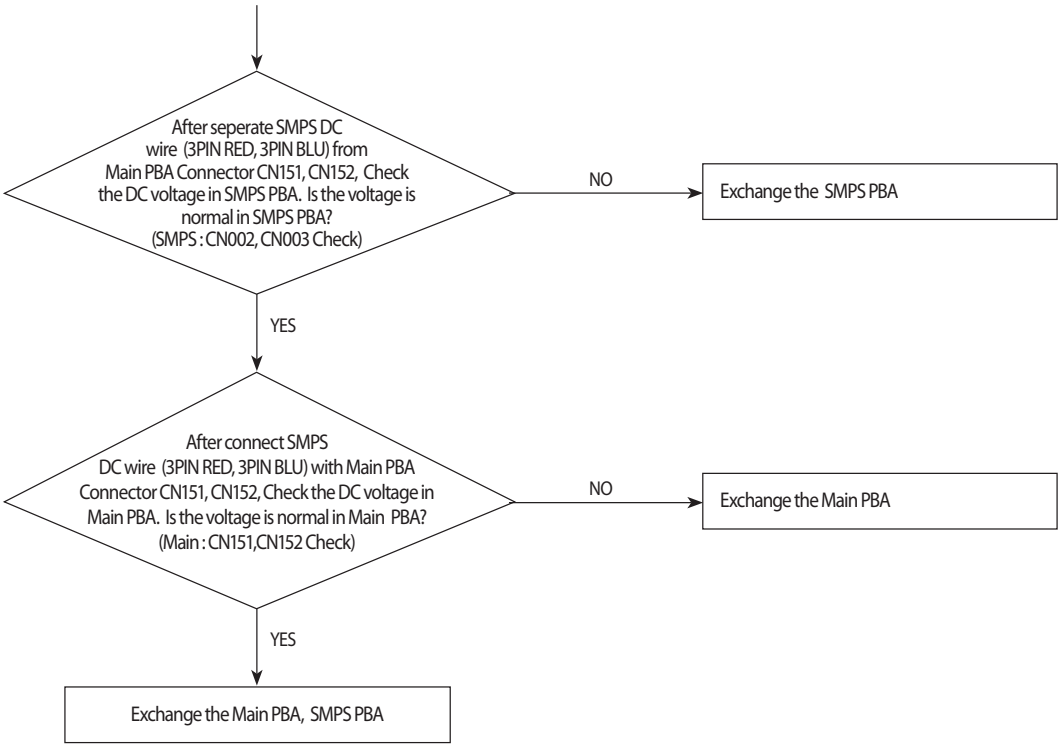
102-24 No power outdoor (Initial Diagnosis) (Not displayed)

1. Checklist :
   1) Is input power normal?
   2) Is AC power linked correctly? (L,N,E)
   3) Is mis-wiring between communication wire and Power wire?
   4) Is mis-wiring between Main PBA and SMPS PBA wire?
   5) Is input voltage of SMPS AC in Main PBA (CN150) normal?
   6) Is the voltage of SMPS DC in Main PBA (CN151,CN152) normal?

2. Troubleshooting procedure

MODEL
AR12(09)HSFSHWK




After seperate SMPS DC wire (3PIN RED, 3PIN BLU) from Main PBA Connector CN151, CN152, Check the DC voltage in SMPS PBA. Is the voltage is normal in SMPS PBA? (SMPS : CN002, CN003 Check)
NO
Exchange the SMPS PBA
YES
After connect SMPS DC wire (3PIN RED, 3PIN BLU) with Main PBA Connector CN151, CN152, Check the DC voltage in Main PBA. Is the voltage is normal in Main PBA? (Main : CN151,CN152 Check)
NO
Exchange the Main PBA
YES
Exchange the Main PBA, SMPS PBA

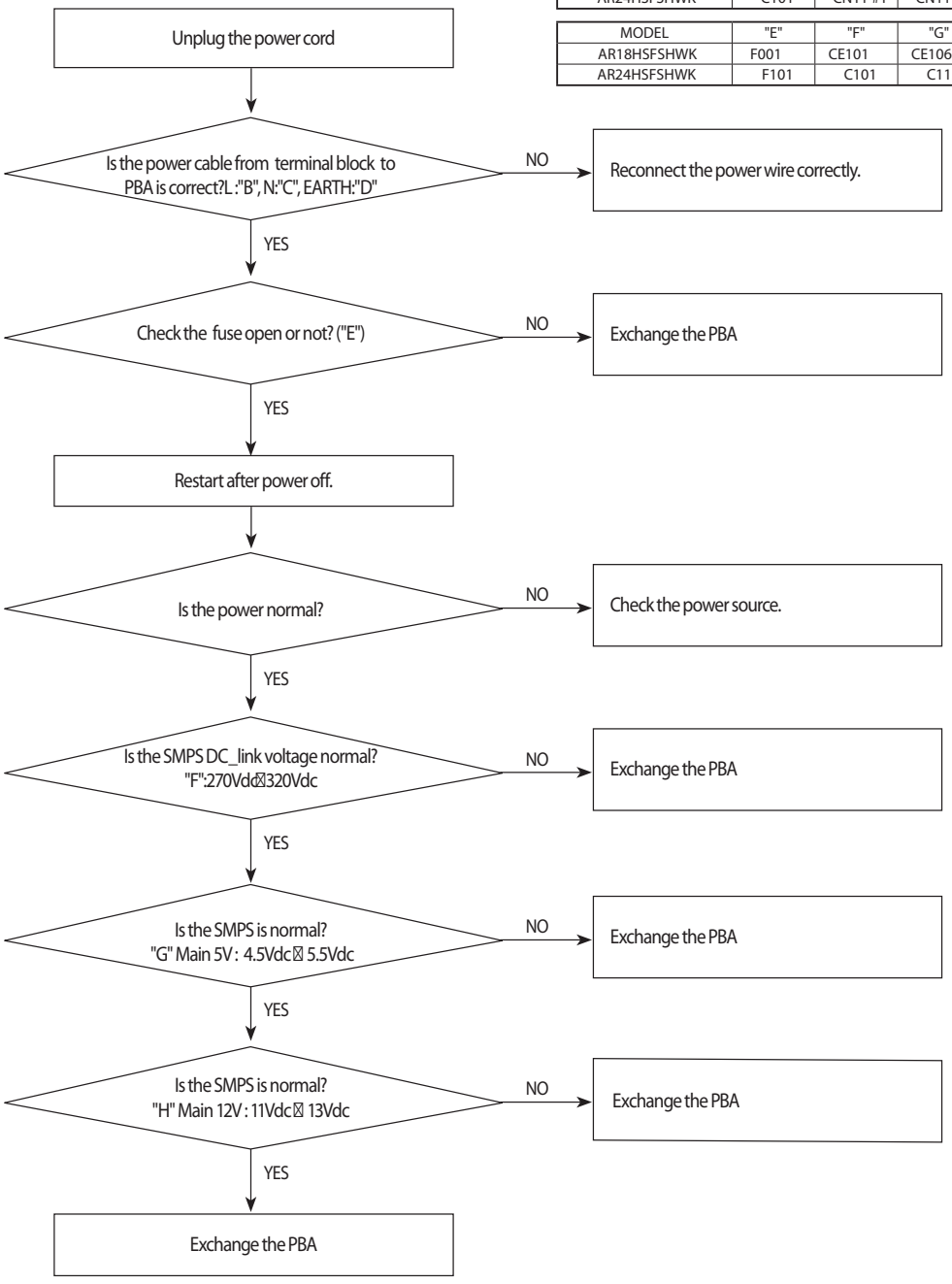
10-2-25 No power outdoor (Initial Diagnosis) (Not displayed)

1. Checklist :
   1) Is input power normal?
   2) Is AC power linked correctly? (L,N,E)
   3) Is mis-wiring between communication wire and Power wire?
   4) Is input voltage of SMPS DC-link capacitor("A") normal?
   5) Is the voltage of SMPS DC normal?

MODEL	"A"	"B"	"C"	"D"
AR18HSFSHWK	CE101	TB-L	TB-N	EARTH
AR24HSFSHWK	C101	CN11 #1	CN11 #3	"-"

MODEL	"E"	"F"	"G"	"H"
AR18HSFSHWK	F001	CE101	CE106	CE108
AR24HSFSHWK	F101	C101	C112	C109

2. Troubleshooting procedure



10-2-26 AC zero cross signal error

Indoor display

3-LED DISPLAY			7-SEG DISPLAY	DESCRIPTION
LED1	LED2	LED3		
◎	○	◎	E472	AC zero cross signal error

Outdoor display

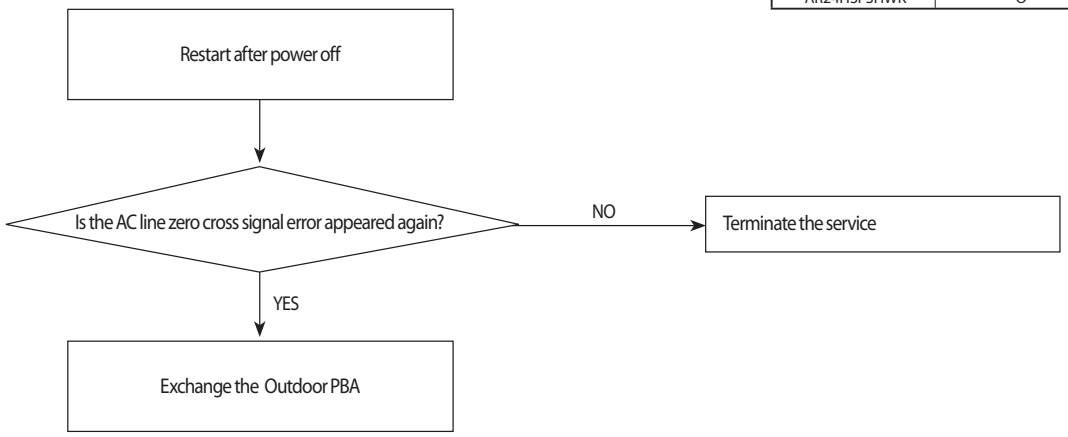
●	●	◎	AC zero cross signal error

● LED ON ◎ LED BLINKING ○ LED OFF

1. Checklist :
   1) Check the power condition at customer's house (Is there any power noise?)
   2) Have been there power failure?

2. Troubleshooting procedure

MODEL	Error display
AR12(09)HSFSHWK	X
AR18HSFSHWK	O
AR24HSFSHWK	O



10-2-27 AC zero cross signal error

Indoor display

3-LED DISPLAY			7-SEG DISPLAY	DESCRIPTION
LED1	LED2	LED3		
◎	○	◎	E556	Capacity miss match error

Outdoor display

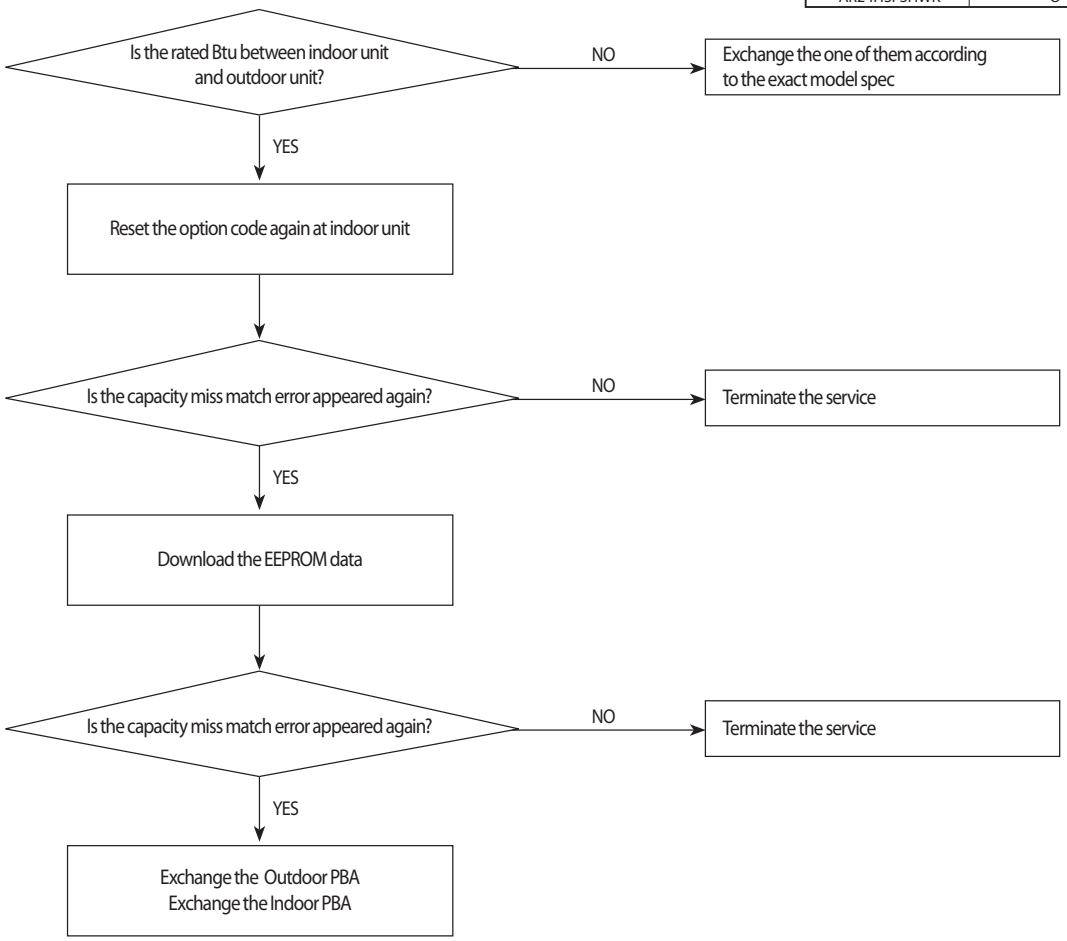
◎	○	○	Capacity miss match error

● LED ON ◎ LED BLINKING ○ LED OFF

1. Checklist :
   1) Check the Btu between indoor and outdoor unit
   2) Check the indoor unit option and outdoor unit EEPROM data

MODEL	Error display
AR12(09)HSFSHWK	X
AR18HSFSHWK	O
AR24HSFSHWK	O

2. Troubleshooting procedure


Is the rated Btu between indoor unit and outdoor unit?
NO
Exchange the one of them according to the exact model spec
YES
Reset the option code again at indoor unit
Is the capacity miss match error appeared again?
NO
Terminate the service
YES
Download the EEPROM data
Is the capacity miss match error appeared again?
NO
Terminate the service
YES
Exchange the Outdoor PBA
Exchange the Indoor PBA

10-2-28 When the remote control is not receiving

1. Checklist :
    1) Check if the connector was normally assembled.
    2) Check the battery in remote control
    3) All the lights out and check again : Change electronic typed to a fluorescent light
    4) Put the set in operation and check the voltage of display PBA
    5) Replace the display PBA

10-2-29 EEV or Valve Close error-Self diagnosis

Indoor display

3-LED DISPLAY			7-SEG DISPLAY	DESCRIPTION
LED1	LED2	LED3		
◎	○	◎	E422	EEV or Valve Close error-Self diagnosis

Outdoor display

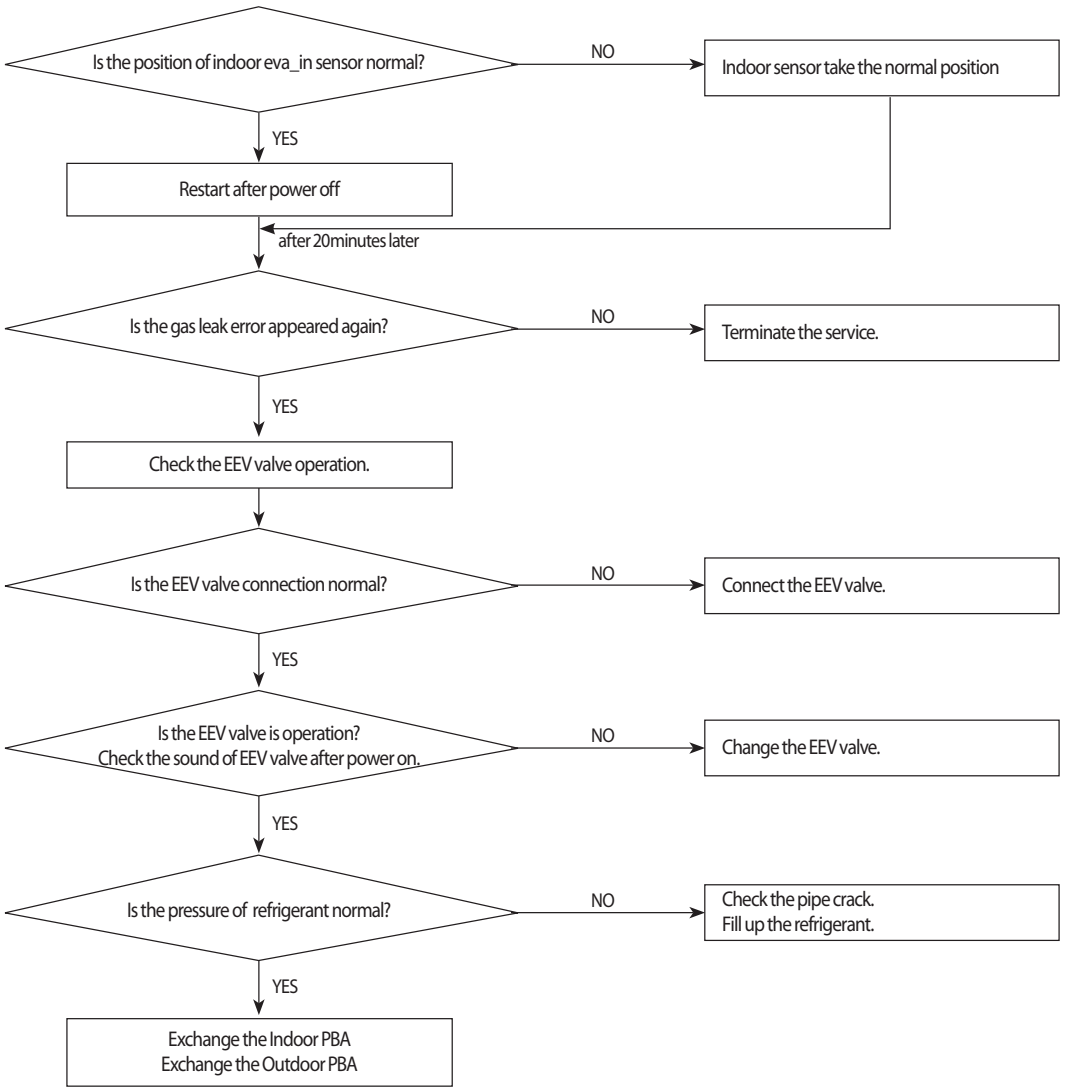
●	●	○	EEV or Valve Close error-Self diagnosis

● LED ON ◎ LED BLINKING ○ LED OFF

1. Checklist :
   1) Is the position of indoor Eva_in sensor normal?
   2) Check the pipe crack
   3) Check the EEV valve connection("A") in Outdoor unit
   4) Check the refrigerant was charged

MODEL	"A"
AR12(09)HSFSHWK	CN701
AR18HSFSHWK	CN503
AR24HSFSHWK	CN81

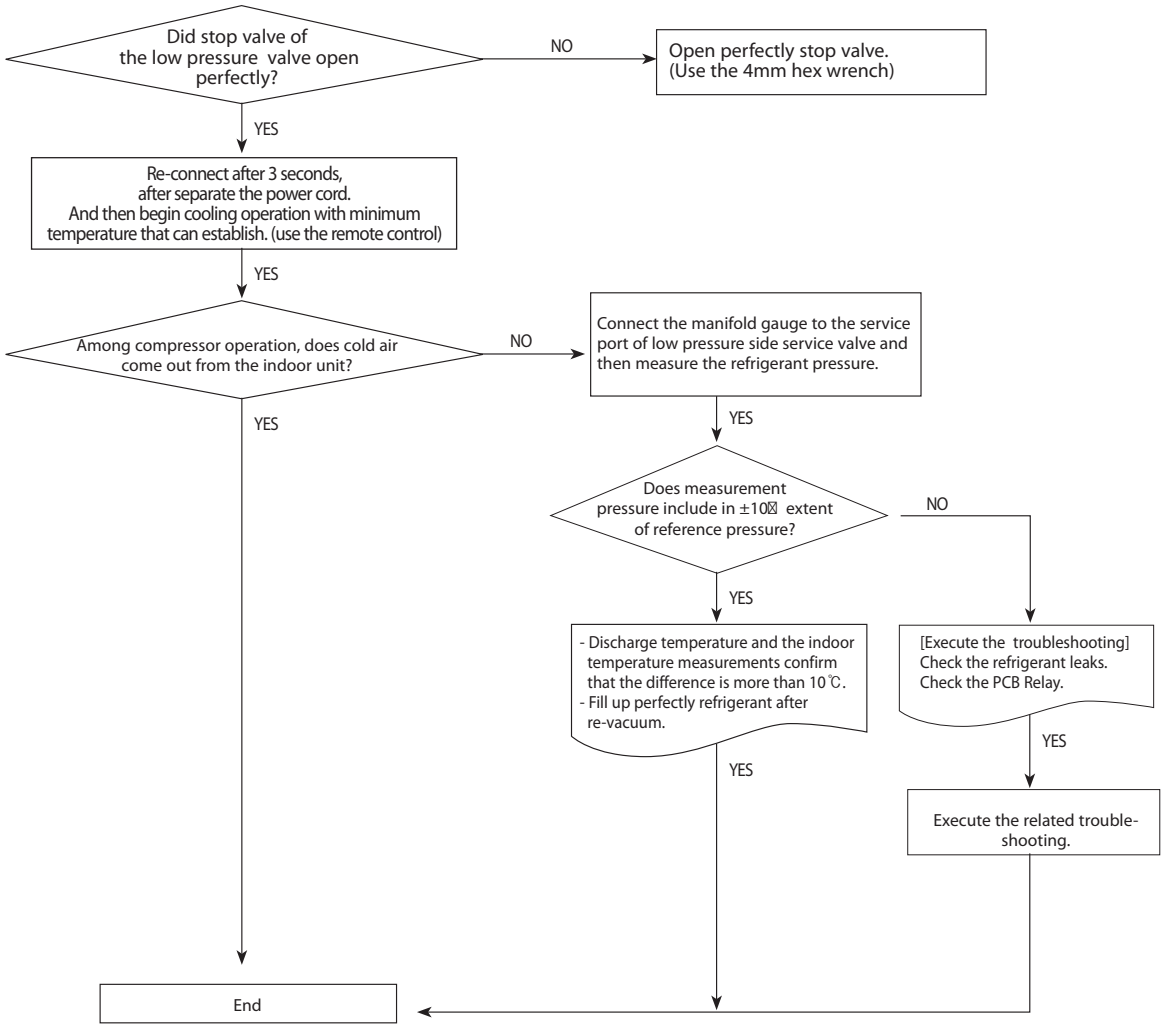
2. Troubleshooting procedure



10-2-30 10-3-18 Smart Install error

1. Checklist :
   1) Check the leakage region.(Use leakage detection liquid or soapy water)
   2) When leakage region is found from service valve and piping connection flare nut part : After the related measures to check the refrigerant supplements and operation.
   3) If the leakage region is pipe welding part : Weld leakage region after refrigerant gas release.(Brass parts should only apply)
   4) If the leakage region is surface area (Heat exchanger or pipe welding region is not) : Replace parts.
   5) Check the PBA Relay
      - Display of indoor unit : Ensure that the operating pilot lamp has been lighted.
      - Ensure that the Relay input voltage of indoor unit PBA is normally.(If the PBA is defective, replace)

2. Troubleshooting procedure


Did stop valve of the low pressure valve open perfectly?
NO
Open perfectly stop valve. (Use the 4mm hex wrench)
YES
Re-connect after 3 seconds, after separate the power cord. And then begin cooling operation with minimum temperature that can establish. (use the remote control)
YES
Among compressor operation, does cold air come out from the indoor unit?
NO
Connect the manifold gauge to the service port of low pressure side service valve and then measure the refrigerant pressure.
YES
YES
Does measurement pressure include in ±10 extent of reference pressure?
NO
YES
- Discharge temperature and the indoor temperature measurements confirm that the difference is more than 10℃.
- Fill up perfectly refrigerant after re-vacuum.
[Execute the troubleshooting] Check the refrigerant leaks. Check the PCB Relay.
YES
YES
Execute the related trouble-shooting.
End

10-3 PCB Inspection Method

10-3-1 Pre-inspection Notices

1. Check if you pulled out the AC power plug when you eliminate the PCB or front panel.
2. Don't hold the PCB side not impose excessive force on it to eliminate the PCB.
3. Don't pull the lead wire but hold the whole housing to connect or disconnect a connector to the PCB.
4. In case of outdoor PCB disassembly, check first the complete discharge of condenser after 1 minute power off.

10-3-2 Inspection procedure

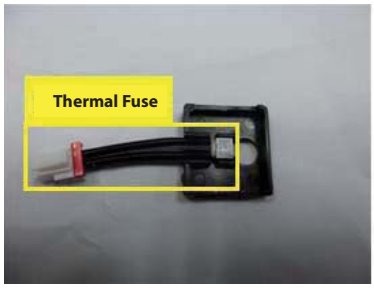
1. Check connector connection and peeling of PCB or bronze coating pattern when you think the PCB is broken.
2. The PCB is composed of 3 parts.
   . Indoor Main part : MICOM and surrounding circuit, relay, fan motor sensing and driving circuit, temperature sensing circuit power circuit of SMPS, buzzer circuit. Communication circuit.
   . Display part : LED lamp, Switch, Remote-control module.
   . Outdoor Main part : MICOM and surround circuit, fan motor sensing and driving circuit, compressor driving circuit power circuit of SMPS, PFC control circuit, 4way circuit, communication circuit, OPTION.(EEV control circuit, temperature sensing circuit)

10-3-3 Indoor detailed inspection procedure

No	procedure	Inspection Method	Cause
1	Plug out and pull the PCB out of the control box Check the PCB fuse.	1) Is 1st fuse disconnected? 2) Is 2nd fuse disconnected?	. Over current. . Indoor Fan motor short. . AC part and pattern short of Indoor PBA.
2	Supply power If the operating lamp twinkles at this time , the above 1)~3) have no relation.	Check the power voltage	
		1) Is the BD71 input voltage 200Vac ~240Vac?	. Power cord is fault, Fuse open, Wrong Power cable Wiring, AC part is faulty.
		2) Is the voltage between both terminal of C111(+)-(-) 12Vdc?	. Switching Trans of Power circuit is faulty.
		3) Is the voltage between both terminal of C118(+)-(-) 5Vdc?	. Power circuit is faulty, Load short.
3	Press the ON/OFF button. 1. Fan speed(high) 2. Continuous Operation	1) Is the voltage over DC 270V being imposed on terminal #1~#3 of fanmotor connector(CN72)?	. Fan motor of the indoor is faulty.
		2) The fan motor of the indoor unit doesn't run.	. Fan motor connector(CN72) is faulty.
		3) The power voltage between terminal #1-#3 of the connector(CN72) is 0V.	. PBA is faulty.

■ New Function [Indoor Terminal Block Safety Device]

1. Thermal Fuse is installed in Terminal Block as below.
(Thermal Fuse is used to prevent PL caused by a defective connection of indoor and outdoor units)

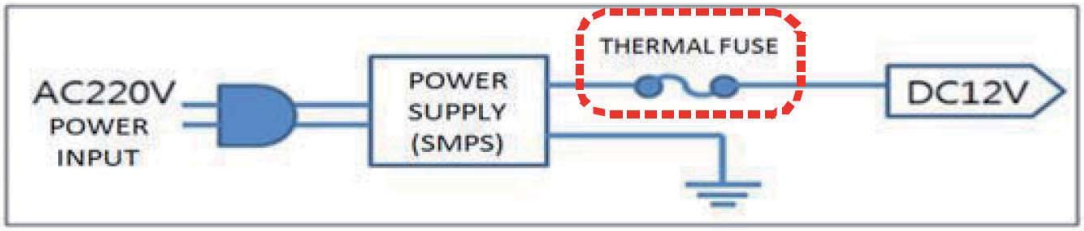


Terminal Block Internals

Connection of terminal block and Main PBA

2. Thermal Fuse is opened when internal temperature of Terminal Block goes to a certain point due to Tracking caused by a defective connection of indoor and outdoor units.

- When Thermal Fuse is opened, Main PBA (DC12V) is turned off and the indoor unit does not operate. (There is no problem with Main PBA in this case)
- In the above case, the change of all-in-one Terminal Block will make Main PBA operate again.



Circuit Block

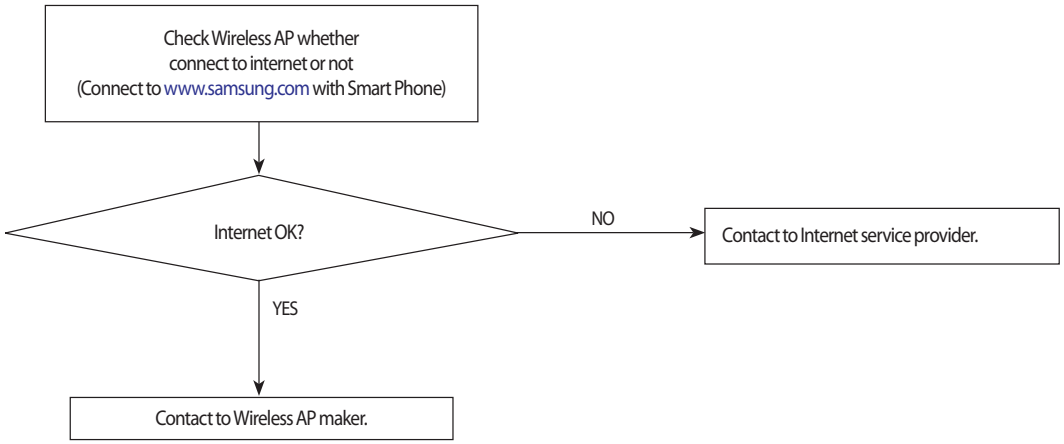
3. Measurement method of fair/defective thermal fuse

Fail

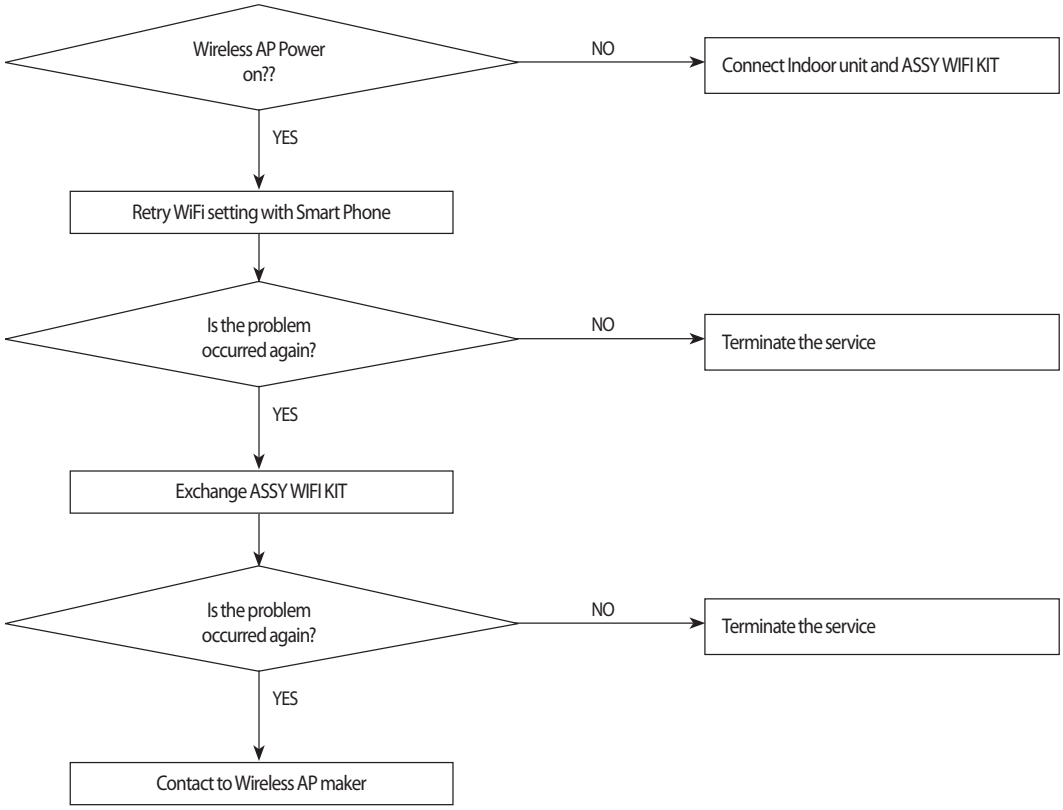
Defective

10-4 ASSY WIFI KIT Inspection Method

10-4-1 Status-LED Blinking with interval 0.5s



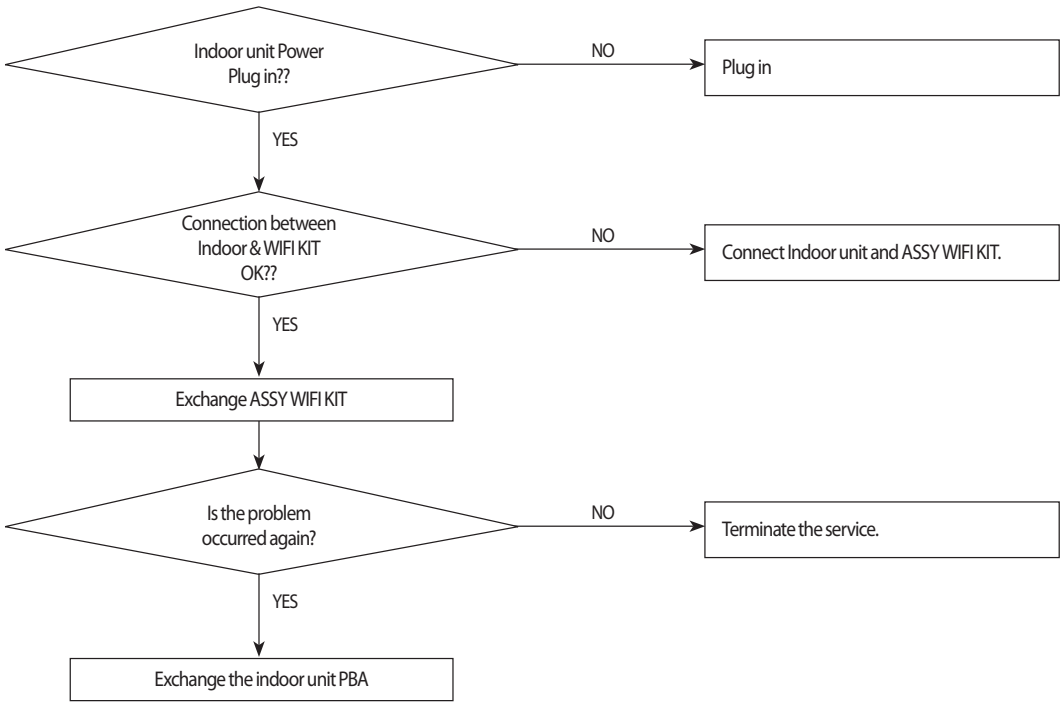
10-4-2 Status-LED Blinking with interval 3s



<< Status LED Indication >>

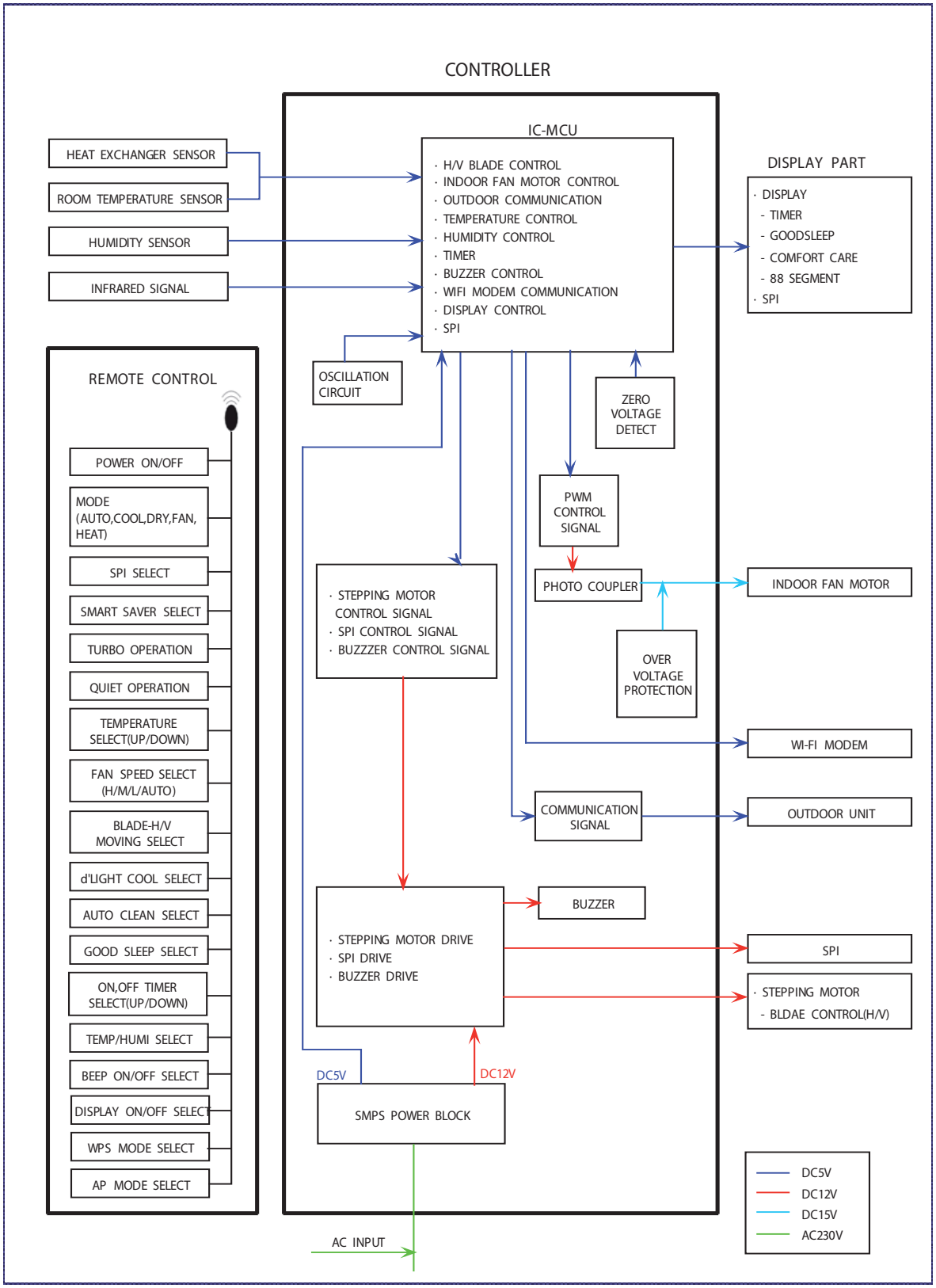
1. LED ON : Connected with AP & INTERNET
2. LED Blinking (Interval of 0.5s) : Connected with AP but not connected with INTERNET
3. LED Blinking (Interval of 3s) : Not connected with AP
4. LED OFF : Not connected with Air Conditioner

10-4-3 Status-LED OFF

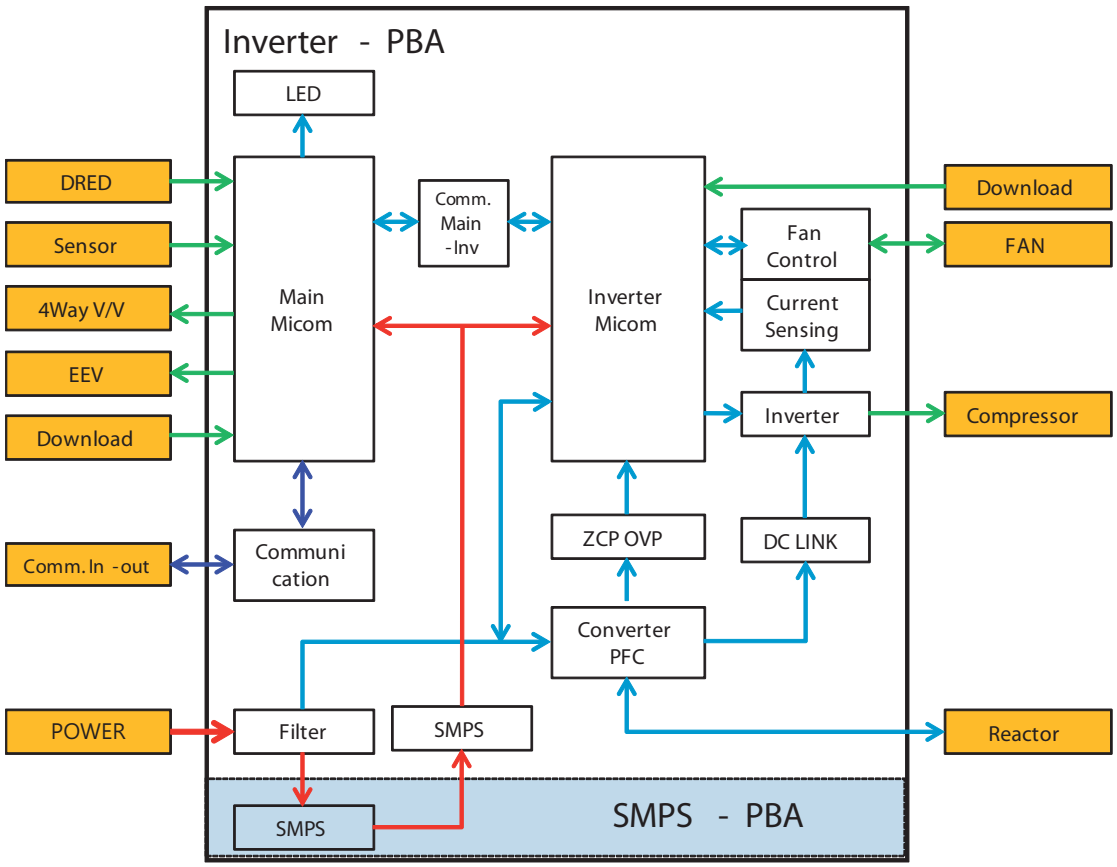


11. Block Diagram

11-1 Indoor unit



11-2 Outdoor unit



11-2-1 Pre-inspection Notices

1. Check if you pulled out the AC power plug when you eliminate the PCB or front panel
2. Don't hold the PCB side not impose excessive force on it to eliminate the PCB
3. Don't pull the lead wire but hold the whole housing to connect or disconnect a connector to the PCB
4. In case of outdoor PCB disassembly, check first the complete discharge of condenser after 1 minute power off

11-2-2 Inspection procedure

1. Check connector connection and peeling of PCB or bronze coating pattern when you think the PCB is broken
2. The PCB is composed of 3 parts
   - Indoor Main part : MICOM and surrounding circuit, relay, fan motor sensing and driving circuit, temperature sensing circuit power circuit of SMPS, buzzer circuit. Communication circuit
   - Display part : LED lamp, Switch, Remote-control module
   - Outdoor Main part : MICOM and surround circuit, fan motor sensing and driving circuit, compressor driving circuit power circuit of SMPS, PFC control circuit, 4way circuit, communication circuit, OPTION (EEV control circuit, temperature sensing circuit)

11-2-3 Indoor detailed inspection procedure

No	Procedure	Inspection Method	Cause
1	Plug out and pull the PCB out of the control box Check the PCB fuse	1) Is 1st fuse disconnected? 2) Is 2nd fuse disconnected?	. Over current . Indoor Fan motor short . AC part and pattern short of Indoor PBA
2	Supply power If the operating lamp twinkles at this time , the above 1)~3) have no relation	Check the power voltage	
		1) Is the BD71 input voltage 200Vac~240Vac?	. Power cord is fault, Fuse open, Wrong Power cable Wiring, AC part is faulty
		2) Is the voltage between both terminal of IC02 pin #1-#2 12Vdc?	. Switching Trans of Power circuit is faulty
		3) Is the voltage between both terminal of IC02 pin #2-#3 5Vdc?	. Power circuit is faulty, Load short
3	Press the ON/OFF button 1. Fan speed(high) 2. Continuous Operation	1) Is the voltage over AC 180V being imposed on terminal #3-#5 of fan motor connector (CN72)?	. Fan motor of the indoor is faulty
		2) The fan motor of the indoor unit doesn't run	. Fan motor connector(CN72) is faulty
		3) The power voltage between terminal #3-#5 of the connector(CN72) is 0V	. PBA is faulty

11-2-4 Outdoor detailed inspection procedure

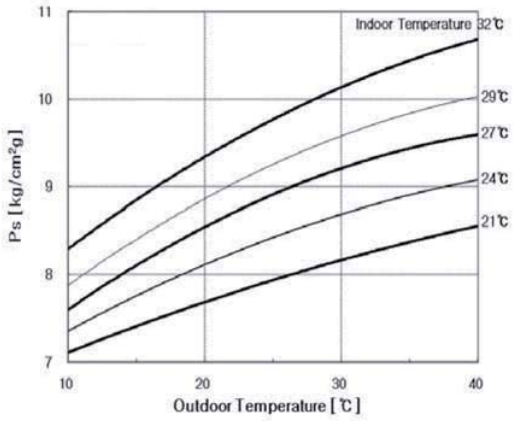
No	Procedure	Inspection Method	Cause
1	Plug out and pull the PCB out of the control box Check the PCB fuse (Wait 3 minutes after power off)	1) Is 1st fuse disconnected?	. Over current . AC part and pattern short of Outdoor PBA
2	Check the Wiring	1) Is the Compressor wire connected clock-wise? 2) Is the Reactor wire connected normal? 3) Is the Fan wire connected normal? 4) Is the 4way wire connected normal? 5) Is the sensor wire connected normal? 6) Is the EEV wire connected normal?	. Wrong assembly . Installation(service) condition is bad
3	"Supply power and operate the set (Use Remote-control, button in indoor set)"	Check the power voltage	
		1) Is the voltage between Terminal block L-N 200Vac~240Vac?	. Power cord is faulty, Wrong Power cable Wiring
		2) Is the C006 voltage 200Vac~240Vac?	. Fuse open . L,N,F1,F2 wire wrong wiring (Terminal Block-PBA)
		2) Is the CN150 voltage 200Vac~240Vac?	. Power circuit is faulty . Load short
		4) Is the PFC050(#26-#27) voltage 200Vac~240Vac after 3 minutes later?	. Fuse open . L,N,F1,F2 wire wrong wiring (Terminal Block-PBA) . PTC020 open . RY021, RY022 is faulty . Outdoor Micom(IC201) error
		5) Is the CE101 voltage 280Vdc~320dc after 3 minutes later?	. PFC050 is faulty . Reactor wire is wrong connection . Power circuit is faulty, Load short . BLDC Fan motor error
		6) Is the voltage CN151 #1-#2 voltage 15Vdc?	. Switching Trans of Power circuit is faulty . Load short
		7) Is the voltage CN152 #1-#2 voltage 12Vdc?	. Switching Trans of Power circuit is faulty . Load short
		8) Is the voltage CN151 #3-#2 voltage 5Vdc?	. Switching Trans of Power circuit is faulty . Load short
4	Check the LED lamp display	1) Normal : RED on, GRN blink, YEL off 2) Abnormal - All off : check no power - abnormal display : check error mode	. F1,F2 wire wrong wiring . Outdoor PBA is faulty

12. Reference Sheet

12-1 Low Refrigerant Pressure Distribution

Note : Please measure the refrigerant pressure after the air conditioner operates on testing cooling mode during more than 10 minutes.

■ **Indoor Temp. Variation : 20°C ~ 32°C**
■ **Outdoor Temp. Variation : -5°C ~ 45°C**



12-2 Pressure & Capacity mark

■ **Power/Heat**

W	cal/s	kcal/h	Btu/h	HP	kg.m/s	lb.m/s
1	0.23885	0.85985	3.4121	0.001341	0.10197	0.73756
4.1868	1	3.6	14.286	0.0056146	0.42693	3.088
1.163	0.27778	1	3.9683	0.0015596	0.11859	0.85778
0.29307	0.06999	0.252	1	3.9302×10^{-4}	0.029885	0.21616
745.7	178.11	641.19	2,544.4	1	76.04	550
9.8067	2.3423	8.4322	33.462	0.013151	1	7.233
1.3558	0.32383	1.0658	4.6262	0.0018182	0.13826	1

12-3 Q & A for Non-trouble

Classification	Class	Description
Cooling	Q	**The cooling is weak.**
	A	When it is hot outside, its cooling capacity decreases due to the increase of the ambient temperature. When the dust filter gets blocked or warm outside air gets in, the cooling capacity will decrease. So, make sure to clean the dust filter frequently, prevent heat loss by closing the doors and insulate the cooling area by using curtains, blinds, shades or window tinting.
	Q	**The cooling is good generally. But, it gets weak when it is considerably hot.**
	A	It occurs when the outdoor unit is exposed to direct sun light and heat-up air is not ventilated well. So, set up a sunblind over the outdoor unit and keep stuff away from the unit to increase the ventilation. When the cooling capacity decreases during a heat wave, clean the heat exchanger of the outdoor unit or spray some cold water to the heat exchanger to increase the cooling capability.
	Q	**The cooling is weak. Does it need refrigerant charging?**
	A	It is not correct charging refrigerant regularly. Except that you have moved in several times or the connection pipes are broken, the refrigerant does not run low. So, when refrigerant is additionally charged, it could be costly and cause a product's failure. When the refrigerant leaks, all of it will escape in a short time resulting in cooling failure and no water coming out of the drain hose. So, if water comes out from the drain hose, it indicates the normal operation of the product and it does not need refrigerant charging.
	Q	**It fails to do cooling.**
	A	When the air conditioner is set to ventilation or the desired temperature is set higher than the current temperature, it fails to do cooling. In this case, select cooling or set the desired temperature lower.
Leakage	Q	**It floods the floor.**
	A	Place the drain hose properly. When it is not placed properly, the drain water would flow back flooding the floor. So, straighten out the drain hose for the water to be drained well.
	Q	**Water drips at the drain connection (service valve) of the outdoor unit.**
	A	When a glass bottle is taken out of the refrigerator, moisture gets condensed on its surface due to the temperature differences. The same principle applies to the air conditioner. When cold refrigerant goes through the copper tube, moisture gets condensed on the surface of the tube and the connection areas. To prevent the water condensation, the pipes are insulated. But, the connection areas of the outdoor unit are not insulated for the purpose of maintenance or repair, and water gets condensed due to the temperature differences and drips down. Generally, it evaporates right away. But, when it drips much during muggy days, put a water pan on the floor.
	Q	**It leaks even though a drain pump is used.**
	A	It occurs when the drain pump is plugged out or it is out of order. Check the power of the drain pump and the position of the drain hose, and when the pump is faulty, contact the drain pump manufacturer. Samsung Electronics do not manufacture drain pumps. So, we are not able to correct the drain pump problems.
Smells	Q	**Whenever the air conditioner is turned on, it irritates my eyes and gives me a headache.**
	A	There are no components in the air conditioner irritating the eyes and sending out chemical smells. But, when the air conditioner is turned on, other smell sources are sucked into the air conditioner and get out of it. So find and root out the smell sources. Generally, it occurs at a interior renovated place, a pharmacy, a gasoline handling place, a tire shop, a second-hand book shop or an electronic component handling place, when its chemical or musty smells are sucked in and sent out, it can be misled that the air conditioner generates them.

Classification	Class	Description
Smells	Q	**Whenever the air conditioner is turned on, it stinks.**
	A	When are no components in the air conditioner sending out chemical smells. But, when the air conditioner is turned on, other smell sources are sucked into the air conditioner and get out of it. So, find and root out the smell sources. Generally, when the drain hose is taken out to the washing room or there are sources of smells such as a diaper bin, a shoe shelf or a socks bin, bad smells generate. Also, it occurs where glass cleaners or air fresheners are used; when they are sucked in interacting with dusts and moistures inside, bad smells generate. these kinds of organic materials noxious to human bodies. So, we recommend against the use of them.
	Q	**Whenever the air conditioner is turned on, it smells sour.**
	A	When the room is papered recently, its paste smells would be sucked inside. Also, when the air conditioner is installed in the study room of young boys loving sweat-generating activities such as the basketball, excessive sweats evaporate and get sucked into the air conditioner resulting in bad smells. So, find and root out problem or refresh the room frequently.
	Q	**Whenever the air conditioner is turned on, it smells musty.**
	A	It is due to the improper keeping of the product after its use. When keeping the product, dry up the inside with the operation of ventilation to prevent must. When the product is kept without drying up the inside with ventilation, mold would grow inside resulting in must. So, open the windows and switch on the ventilation function to get rid of the saturated smell inside.
	Q	**Whenever the air conditioner is turned on, it sends out bad smells such as stale smells.**
	A	It occurs generally when there are pet animals in the house. Their smells stay at the same place. But, when the air conditioner is turned on, the air gets circulated resulting in the circulation of the smells. So, find and root out the problem or refresh the room frequently.
	Q	**It sends out bad smells.**
	A	When the air filter is filthy, it could send out bad smells. So, clean the filter and ventilate the room with the windows open while operating the ventilation function.
Operation	Q	**It won't start.**
	A	There is a power failure or it is plugged out. Also, check if the power distribution panel is switched off.
	Q	**It goes off during operation.**
	A	When the hot air does not escape properly, it goes off during operation. it occurs when it does not ventilate properly because the outdoor unit is covered, the back of the outdoor unit is blocked by a cardboard or a plywood panel, and the front of the outdoor unit is blocked by the closed window or other obstacles. Clear the above obstacles from the outdoor unit.
	Q	**It generally works properly. But, when it's considerably hot, it goes off during operation.**
	A	It occurs when the outdoor unit is exposed to direct sunlight and the hot air does not escape properly. Set up a sun blind over the outdoor unit and clear the neighboring obstacles from the outdoor unit to provide good ventilation. When it goes off frequently during a heat wave, it would prevent the turn-off and increase the cooling capacity cleaning the outdoor unit or spraying some water to the heat exchanger.
	Q	**The remote controller won't operate.**
	A	When the batteries run out or the transmitter or receiver of the remote controller is blocked by obstacles, change the batteries or keep the obstacles away from the controlling area. Also, the remote controller may mot work under intensive light from a 3-wave length lamp or a neon sign due to the EMI. In this case, take the remote controller closer to the receiver.

Classification	Class	Description
Installation	**Q**	**Who installs the air conditioner? (Relocation/Re-installation)**
	A	When relocating or re-installing the air conditioner, make sure to contact Samsung Electronics Service Center or Authorized Service Agent and have them to do the job. (If not, it could cause personal injury or product damage.) The cost for the relocation/re-installation of the air conditioner is subject to the customer's expense. There is a cost table. But, our service engineer needs to visit to total up the cost correctly. When you move in, make sure to contact Samsung Electronics Service Center or Authorized Service Agent in advance to streamline the process.
	Q	**Is it possible to install the outdoor unit outside?**
	A	It is possible to install it at a designated place in the apartment or on the rooftop nearby. But, it's illegal hanging an angle iron case with the outdoor unit in it outside the apartment. Also, it is illegal obstructing passers-by with the outdoor unit installed outside.
	Q	**What can be done to install the outdoor unit facing the road because it is a commercial building?**
	A	The following is an excerpt from building code going into effect from JUNE 1 st 2005. "The exhaust pipe of a cooling or ventilation facility installed in a building adjacent to the streets of commercial or residential areas shall bel installed higher than 2 m to prevent the exhaust air from blowing directly to passers-by and the current facilities shall be corrected by MAY 31 st 2005." So, please install it higher than 2 m or not to blow the hot exhausting air directly to passers-by.
	Q	**What about installing a windscreen during installation not to blow hot air directly to passers-by?**
	A	When the hot air from the front of the outdoor unit is blocked, the product's performance will be affected and it will fail to operate properly. So, keep it at least 300mm away from its surrounding walls and give it good ventilation.

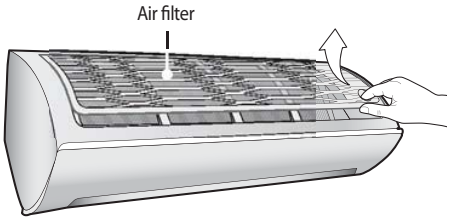
12-4 Cleaning /Filter Change

12-4-1 Cleaning your Air Conditioner

To get the best possible use out of your air conditioner, you must clean it regularly to remove the dust that accumulates on the air filter.

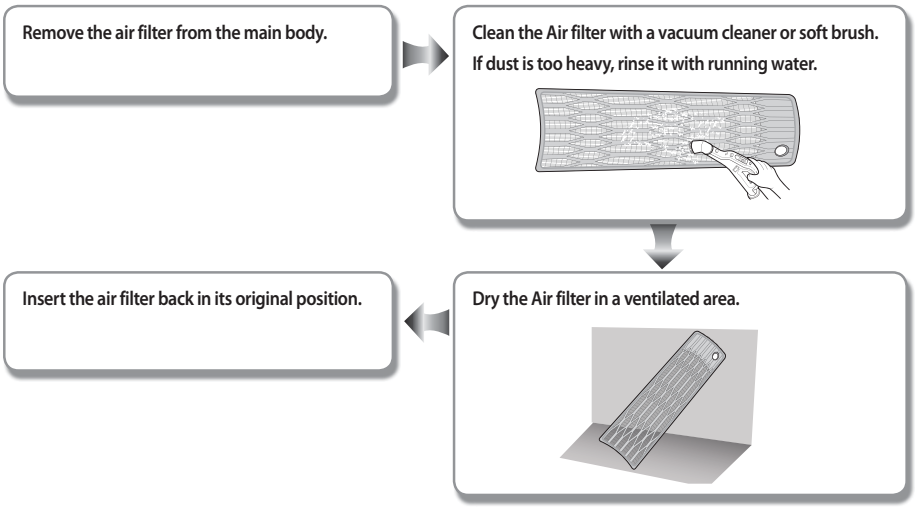
Removing the Air filter

There is a hole on the bottom right side of the filter. Put your finger in that hole to get a grip on the filter and slightly push it up to release the hooks from the bottom side. Then, pull it down to remove the filter from the main body.



Cleaning the air filter

Washable foam based air filter captures large particles from the air. The filter is cleaned with a vacuum or by hand washing.


Remove the air filter from the main body.
Clean the Air filter with a vacuum cleaner or soft brush.
If dust is too heavy, rinse it with running water.
Dry the Air filter in a ventilated area.
Insert the air filter back in its original position.

NOTE

- Clean the Air filter every 2 weeks. Cleaning term may differ depending on the usage and environmental conditions. In dusty area, clean it once a week.
- If the Air filter dries in a confined (or humid) area, odors may generate. If it occurs, re-clean and dry it in a well-ventilated area.
- When the filter clean reminder is on, please press the 2nd F button and then press the ECO Run button on remote controller.

12-5 Installation

12-5-1 Before Installation

Keep the air conditioner outlet and inlet free from its surroundings.
In case of installation, keep the symmetry and fix it to prevent vibration.
The pipe length shall meet the standard as far as possible.

12-5-2 Installation Procedure

■ Location

Install the product in an area to guarantee the best cooling effect, convenience of piping and electric work, and inexistence of vibration or wind.

■ Wall Drilling

Drill the wall downward in a diameter of 60 to 65mm.

■ Fixing Indoor Unit & Outdoor Unit

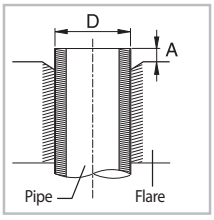
Fix the air conditioner indoor unit securely to the wall. Secure the outdoor unit in a suitable position.

■ Pipe Spooling & Connectingt

You shall cut the pipe with a pipe cutter and grind all the burrs of the cut surface.
pipe expansion may continue until the pipe surface becomes uneven or torn apart.
Be sure to use a torque wrench to tighten pipes or flare nuts.

<Torque & Depth>

Outer Diameter (D)	Torque(kgf·cm)	Depth(A)
ø6.35 mm(1/4")	140~170	1.3 mm
ø9.52 mm(3/8")	250~280	1.8 mm
ø12.70 mm(1/2")	380~420	2.0 mm
ø15.88 mm(5/8")	440~480	2.2 mm
ø19.05 mm(4/4")	9900~1,210	2.2 mm



■ Leak Test

Put an inset gas like nitrogen in the outdoor unit pipe and put soap bubbles or other test liquids on the pipe surface for the leak test.

■ Drain Hose Connecting

Install the drain hose downward to drain water naturally. Be sure to pour water into the hose to check if it drains well.

■ Electric & Earth Work

Electric and earth work shall meet the "Electric Facility Technology Standard" and the "Internal Wire Regulation" of the Electric Business Laws.

■ Inspection & Trial Run

Upon completion of the tests, you shall make a trial run while you explain the main functions of the air conditioner to finish the installation.

12-6 Installation Diagram of Indoor Unit and Outdoor Unit

12-6-1 Air-Purge Procedure

1) Connect each assembly pipe to the appropriate valve on the outdoor unit and tighten the flare nut.

2) Connect the charging hose of low pressure side of manifold gauge to the packed valve having a service port (3/8" Packed valve) as shown at the figure.

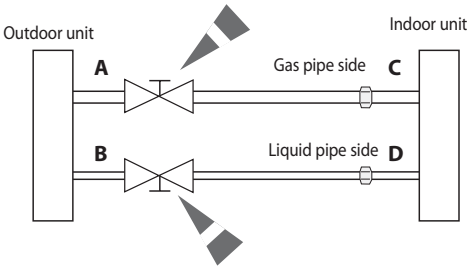
3) Open the valve of the low pressure side of manifold gauge counter-clockwise.

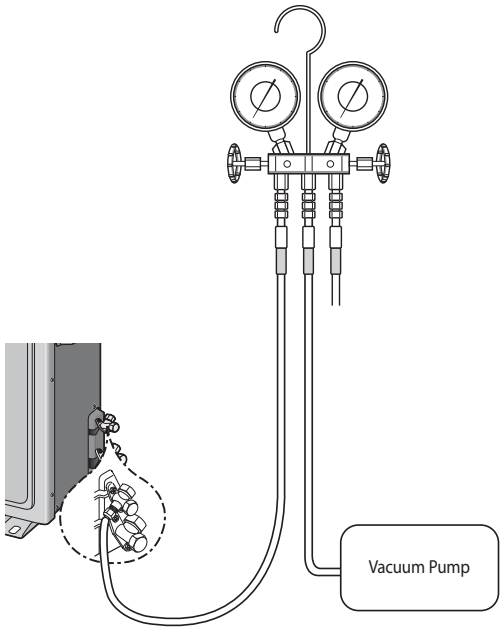
4) Purge the air from the system using vacuum pump for about 30 minutes.
   - After that, please recheck that pressure is stabilized.
   - Close the valve of the low pressure side of manifold gauge clockwise.
   - Remove the hose of the low pressure side of manifold gauge.

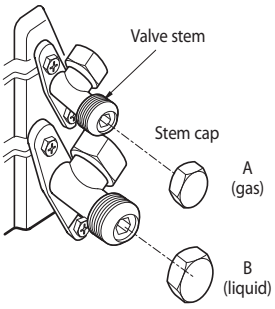
5) Set valve cork of both liquid side and gas side of packed valve to the open position.

6) Mount the valve stem nuts to the 2 way and 3 way valve. And mount the service port cap to 3 way valve.

7) Check for gas leakage.
   - At this time, especially check for gas leakage from the 3 way valve's stem nuts, and from the service port cap.







12-6-2 "Pump down" Procedure

Pump down will be carried out when an evaporator is replaced or when the unit is relocated in another area.

1) Remove the caps from the 3 way valve and the 3 way valve.

2) Turn the 3 way valve clockwise to close and connect a pressure gauge (low pressure side) to the service valve, and open the 3 way valve again.

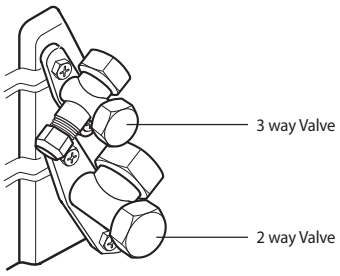
3) Set the unit to cool operation mode. (Check if the compressor is operating.)

4) Turn the 3 way valve clockwise to close.

5) When the pressure gauge indicates "0" turn the 3 way valve clockwise to close.

6) Stop operation of the air conditioner.

7) Close the cap of each valve.



Remarks

Relocation of the air conditioner

- Refer to this procedure when the unit is relocated.
- Carry out the pump down procedure (refer to the details of 'pump down').
- Remove the power cord.
- Disconnect the assembly cable from the indoor and outdoor units.
- Remove the flare nut connecting the indoor unit and the pipe.
- At this time, cover the pipe of the indoor unit and the other pipe using a cap or vinyl plug to avoid foreign material entering.
- Disconnect the pipe connected to the outdoor unit.
  At this time, cover the valve of the outdoor unit and the other pipe using a cap or vinyl plug to avoid foreign material entering.
- Make sure you do not bend the connection pipes in the middle and store together with the cables.
- Move the indoor and outdoor units to a new location.
- Remove the mounting plate for the indoor unit and move it to a new location.

12-7.Reference Sheet

Index for Model Name

✳ Project model code for overseas from 2007(For RAC Export Models)

Model Code

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th
Project		Capacity		Sell	Feature		Series		Color		Unit	Export	
A	R	0	9	H	S	F	S	H	W	K	N/X	C	V
A	R	1	2	H	S	F	S	H	W	K	N/X	C	V
A	R	1	8	H	S	F	S	H	W	K	N/X	C	V
A	R	2	4	H	S	F	S	H	W	K	N/X	C	V

ITEM	1ST	2ND
RAC	A	R
FAC	A	F
WAC	A	W

Item	Reference	3TH	4TH
1	Export	0	9
2	Export	1	2
3	Export	1	8
4	Export	2	4
5	Export	3	0

Item	5TH
12Year	E
13Year	F
14Year	H
15Year	J
16Year	K

Item	6TH
INVERTER HP	S
INVERTER CO	V

Item1	Item2	7TH
Export	The virus doctor (The India / Latin America A / PAC K besides)	S
Export	NO virus doctor (the India / Latin America A / PAC K besides)	F
Special instructions: About AR**FSSSCUR/SA ,the 7TH is "S", but there is no virus doctor in these models.		

9TH DIGIT		
Export	1st MODEL	A
Export	2nd	B
Export	3rd MODEL	C
Export	4th MODEL	D
Export	5th MODEL	E

Item 1	Item 2	Item 3	8TH	9TH
Export	RAC	FMC FLG (Best)	1ST MODEL	F
Export	RAC	FMC DLX (Better)	1ST MODEL	D
Export	RAC	FMC STD (Good1)	1ST MODEL	S
Export	RAC	FMC ENT (Good2)	1ST MODEL	N

Division	Series	Project	Color Name	Division component	Sinkeolreo code (10TH,11TH)	Remark
A3050	F	Best	Twilight	Grille	WK	
	F	Best	TBD	Grille	TBD	
	D	Better	Twilight	Grille	WK	
	D	Better	TBD	Grille	TBD	
	S	Good1	Twilight	Grille	WK	Deco : Transparency
	S	Good1	Midnight Blue	Deco	UR	Grille : Twilight
	N	Good2	Twilight	Grille	WK	
	N	Good2	TBD	Grille	TBD	Grille : Metalic Gray

Item1	Item2	12TH
Export	SET	/
Export	IN	N
Export	OUT	X

Item	The existing code	The sales area	CIS Desription	The integrated code (13TH,14TH)
1	XCV	America	AMERICA (XCV	CV

● Except the RAC Export Models for China.

SAMSUNG ELECTRONICS

GSPN (GLOBAL SERVICE PARTNER NETWORK)

Area	Web Site
Europe, CIS, Mideast & Africa	gspn1.samsungcsportal.com
Asia	gspn2.samsungcsportal.com
North & Latin America	gspn3.samsungcsportal.com
China	china.samsungportal.com

This Service Manual is a property of Samsung Electronics Co., Ltd.
Any unauthorized use of Manual can be punished under applicable International and/or domestic law.

© Samsung Electronics Co., Ltd. August. 2013.
Code No. AC-00045K_1

Contents

8. PCB Diagram 8-1
8-1 Indoor Unit 8-1
8-2 Outdoor PCB 8-2
8-3 Wire connecting the indoor unit terminal blocks 8-8

9. Operating Instructions 9-1
9-1 Name of Each Part 9-1
9-2 Wireless Remote Control-Buttons and Display 9-2

10. Troubleshooting 10-1
10-1 Items to be checked first 10-1
10-2 Communication Error 10-2
10-3 PCB Inspection Method 10-37

11. Block Diagram 11-1
11-1 Indoor unit 11-1
11-2 Outdoor unit 11-2

12. Reference Sheet 12-1
12-1 Low Refrigerant Pressure Distribution 12-1
12-2 Pressure & Capacity mark 12-1
12-3 Q & A for Non-trouble 12-2
12-4 Cleaning /Filter Change 12-5
12-5 Installation 12-6
12-6 Installation Diagram of Indoor Unit and Outdoor Unit 12-7

1. Precautions

1-1 Installing the air conditioner

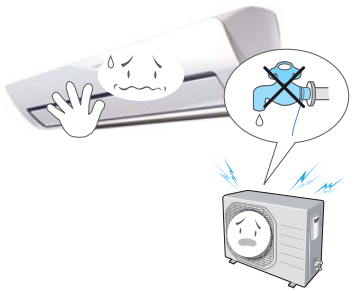
- Uses should not install the air conditioner by themselves.
  Ask the dealer or authorized company to install the air conditioner e□cept window-type air conditioner in U.S.A and Canada.
- If you don□t install the air conditioner properly, it may cause a fire, a water leakage or an electric shock.
- You must install the air conditioner according to the national wiring regulations and safety regulations.
- Install the indoor unit higher than 2.5m from the floor to avoid the injury caused by the operation of the fan.
  (e□cept the window-type air conditioner)
- The manufacturer is not responsible for any accidents or injury caused by an incorrect installation.
- When installing the built-in type air conditioner, keep all electric cables such as the power cable and the connection cord in pipes, ducts, or cable channels to protect them from the danger of impact or any other incidents.

1-2 Power supply and circuit breaker

- If the power cord of the air conditioner is damaged, it must be replaced by the manufacturer or a □ualified person in order to avoid a hazard.
- The air conditioner must be plugged into an independent circuit if applicable or connect the power cable to the au□iliary circuit breaker.
  An all pole disconnection form the power supply must be incorporated in the fi□ed wiring with a contact opening of>3mm.
- Do not e□tend an electric cord to the air conditioner.
- The air conditioner must be plugged in after you complete the installation.

1-3 During operation

- Do not repair the air conditioner at your discretion.
  It is recommended to contact a service center directly.
- Never spill any kind of li□uid on the air conditioner.
  If this happens, turn off the air conditioner and contact an authorized service center.
- Do not insert anything between the airflow blades to prevent damage of the inner fan and conse□uent injury.
  Keep children away from the air conditioner.
- Do not place any obstacles in front of the air conditioner.
- Do not spray any kind of li□uid into the indoor unit. If this happens, turn off the air conditioner and contact a service center.
- Make sure that the air conditioner is well ventilated at all times.
  Do not place a cloth or other materials over it.
- Remove the batteries if you don□t use the remote control for a long time. (If applicable)
- Use the remote control within 7 meters from the indoor unit. (If applicable)

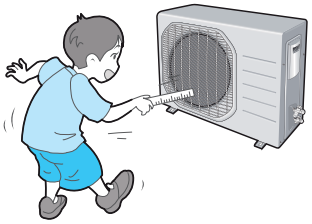


1-4 Disposing of the unit

- Before the throwing out the air conditioner, remove the batteries from the remote control.
- When you dispose of the air conditioner, consult your dealer. If pipes are removed incorrectly, refrigerant may blow out and cause air pollution. When it contacts with your skin, it can cause skin injury.
- The package of the air conditioner should be recycled or disposed of properly for environmental reasons.

1-5 Others

- Never store or load the air conditioner upside down or sideways to prevent the damage to the compressor.
- Young children or infirm persons should be always supervised when they use the air conditioner.
- Ma current is measured according to IEC standard for safety.
- Current is measured according to ISO standard for energy efficiency.



2. Product Specifications

2-1 The Feature of Product

■ 2 step cooling
- Get cool quickly and keep cool comfortably without shivering

■ Single user mode
- No worrying about the electricity bill, even using it when you're alone.

■ Crystal gloss design
- Uniquely stylish and innovative design to enhance your life and home

■ Smart Wi-Fi
- Control air conditioner anytime and anywhere

■ Smart Installation
- Get the confidence that it's perfectly installed

■ Smart Installation
- Get the confidence that it's perfectly installed

■ Smart Check
- Don’t worry about the trouble-shooting in your home

■ Triple Protector Plus
- Use longer without damage in unsuitable conditions

■ Easy Installation
- Secure the easy Installation of Indoor unit and pipe connection

■ Easy Filter
- Quick and easy to clean filter saves time and effort

2-2 Product Specifications

				0		12		1		24	
T pe				Wa -mounte		Wa -mounte		Wa -mounte		Wa -mounte	
Per ormance	Capacit	Coo in	KW	0. /2.64/3.20		0. /3.52/4.00		1.6/5.275/7.00		2.60/6.448/ .30	
		Heatin	(Low /St /Max)	0. /3.52/5.20		0. /3. /6.00		1.2/6.04/8.00		2.2/7. 13/12.00	
	Runnin Fre uenc	Coo in	H	15/38/45		15/53/67		15/47/73		15/41/6	
		Heatin	(Low /St /Max)	15/55/82		15/63/103		15/54/72		15/46/75	
	Noise	Coo in	B (H/L)	45/44		47/45		46		50/4	
		Heatin		51		53		57		60	
	Ener E icienc Ratio	Coo in	W/W (St)	4.4		4.3		3.88		3.58	
		Heatin		4		4.5		3.7		3.14	
	Pow er		p -V-H	1p ase, 208-230V , 60H		1p ase, 208-230V , 60H		1p ase, 208-230V , 60H		1p ase, 208-230V , 60H	
Pow	Pow er Consumtion	Coo in	W (Low /St /Max)	220/600/700		220/880/1150		380/1360/2200		600/1800/3150	
		Heatin		1 0/880/1400		1 0/1060/1800		300/1630/2100		480/2520/4200	
	Operatin Current	Coo in	A (Low /St /Max)	1.5/2. /3.2		1.5/4.1/5.3		1.8/6.2/ .7		3.2/8.3/14.0	
		Heatin		1.3/4.1/6.5		1.3/4. /8.3		1.5/7.3/10.5		2.6/11.5/1 .0	
	Pow er Factor	Coo in	(St)	85		85		0		0	
		Heatin		85		85		0		0	
Si e	Outer Dimension	Wi t *Hei t *Dept	mm	56*317*335	26*640*384	56*317*335	26*640*384	1123*354*384	1023* 11*413	1123*354*384	1051*1045*417
	Wei t(Net)			11	37	11	37	14	53	14	71.5
	Re ri erant Pipe	Li ui	mm	6.35		6.35		6.35		6.35	
		Gas	mm	.52		.52		.52		.52	
	Drain Hose		L*D	550*20		550*20		550*20		550*20	
	Compressor	T pe		UG T115FUAE SS		UG T115FUAE SS		UG4T200FUAE4SS		UG8T300FUBJUSS	
		Motor	T pe	-		-		-		-	
			Rate Output(W)	-		-		-		-	
	Oi T pe			-		-		-		-	
	B ow er	T pe		Cross- ow	Prope er	Cross- ow	Prope er	Cross- ow	Prope er	Cross- ow	Prope er
		motor	T pe	Resin/stee /AC	Resin/stee /AC	Resin/stee /AC	Resin/stee /AC	Resin/stee /AC	Resin/stee /AC	Resin/stee /AC	Resin/stee /AC
			Rate Output(W)	-	-	-	-	-	-	-	-
Heat Exc an er				2Row 14Step 1Row 10Step	2Row 24Step	2Row 14Step 1Row 10Step	2Row 24Step	2Row 16Step 1Row 12Step	2Row 36Step	2Row 16Step 1Row 12Step	2Row 42Step
Re ri erant Contro Unit				EEV		EEV		EEV		EEV	
Free er Oi Capacit			cc	-		-		-		-	
Re ri erant to C an e(R410A)				1250		1250		2000		2300	
Proterction Device(OLP)				None		None		None		None	
Operation con ition ran e	Coo in			-10 46℃		-10 46℃		-10 46℃		-10 46℃	
	Heatin			-15 24℃		-15 24℃		-15 24℃		-15 24℃	

2-3 The Comparative Specifications of Product

ITEM	MODEL	Deve op Mo e			
		AR0 HSFSJWK/CV	AR12HSFSJWK/CV	AR18HSFSJWK/CV	AR24HSFSJWK/CV
Desi n	In oor Unit				
	Out oor Unit				
Net Wei t	In oor Unit	11	11	14	14
	Out oor Unit	37	37	53	71.5
Outer Dimension	In oor Unit	56*317*335	56*317*335	1123*354*384	1123*354*384
	Out oor Unit	26*640*384	26*640*384	1023* 11*413	1051*1045*417
Noise	In oor Unit	45	47	46	50
	Out oor Unit	51	53	57	60
Air Puri in S stem	Fi ter	FULL HDFILTER	FULL HDFILTER	FULL HDFILTER	FULL HDFILTER

2-4 Accessory and Option Specifications

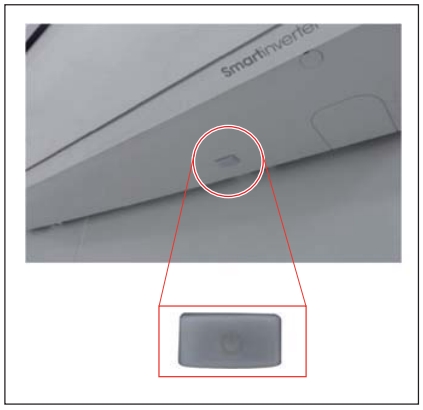
Item	Descriptions	Code-No.	QTY	Remark
	Installation Plate ✳✳09/12✳ (04 frame)	DB90-07732A	1	Indoor unit case
	Installation Plate ✳18/24/30✳ (05 frame)	DB90-07731A	1	
	Remote controller	DB93-14195G	1	
	Batteries for Remote controller	4301-000121	2	
	User's & Installation Manual	DB68-04405A	1	
	Wi-Fi Manual	DB68-04419A	1	
	Remote Control Holder	–	–	
	M4x10 Tapped Screws	DB97-23032A	2	
	M4 x 16 Tapped Screws	DB97-11984A	2	
	Drain Plug	DB67-20011A	1	Outdoor unit case
	Rubber Leg	DB73-20134A	4	

3. Alignment and Adjustments

3-1 Test Mode

■ How to Approach Test Mode

You can approach the test mode by pressing the on/off switch of indoor unit for 5 seconds.



■ Test mode operation option

After installing the air conditioner, check whether each subordinate is normally operated or not by operating the test mode.

- **When an Error occurs, display the Error Mode.**
- **Operation Mode :** Cool mode. operate the cool mode by operating the compressor by force without the compressor ON/OFF according to the set temperature/indoor temperature. (Do not follow the antifreeze control)
- **Up-down louver :** Up-down swing mode
- **Indoor Fan :** Turbo

Note

- Because the teat mode operate the cool mode by force not related to the set temperature / indoor temperature, check whether each subordinate is operated normally or not after completing installation and must turn off the power of the air conditioner.

3-2 Display Error and Check Method

3-2-1 Indoor Display Error and Check Method

ERROR MODE	DESCRIPTION
E101 / E102	Communication Error (Indoor or Outdoor)
E121	ROOM TH sensor error
E122	INDOOR MID, INDOOR IN PIPE-TH sensor error
E154	Fan Error (Indoor)
E162	EEPROM Error (Indoor)
E163	Option Error
E203	Time out Comm. (Inv Micom↔Main Micom)
E221	OUT-TH(Outdoor Temperature) Sensor Error
E231	CON-TH(Cond Temperature) Sensor Error
E251	DIS-TH(Discharge Temperature) Sensor Error
E416	DIS-TH(Discharge Temperature) Over Error
E422	EEV or Valve Close error-Self diagnosis
E440	Prohibit Operation Condition Error (Heating)
E441	Prohibit Operation Condition Error (Cooling)
E458	Fan Error(Outdoor)
E461	Comp Starting Error
E462	AC Input I_Limit Trip Error
E464	IPM Over Current(O.C) Error
E465	Comp V_limit/I_limit Error
E466	DC-Link Voltage Under/Over Error
E467	Comp Wire Missing Error
E468	Current Sensor Error
E469	DC-Link Voltage Sensor Error
E470	EEPROM Data Error (no data)
E471	EEPROM Data Error (Main Micom↔Inv Micom)
E474	Heatsink Sensor Error
E483	Over Voltage Protection Error
E484	PFC Over Load Error
E485	Input Current Sensor Error
E488	AC Input Voltage Sensor Error
E500	Heatsink Over Temperature Error
E554	Gas Leak Error

ERROR MODE				DESCRIPTION
7-SEG	LED1	LED2	LED3	
	OPERATION	TIMER	OPTION	
E101,E102	○	◑	◑	Communication error (indoor <-> outdoor)
E121	○	◑	○	ROOM TH sensor error
E122,E123	◑	◑	○	INDOOR MID,INDOOR IN PIPE-TH sensor error
E154	○	○	◑	Fan error(indoor)
E162	◑	◑	◑	EEPROM error
E163	◑	◑	◑	Option error
FROM E200	◑	○	◑	Outdoor error display
E422	●	○	◑	EEV or Valve Close error-Self diagnosis

● : LAMP ON ○ : LAMP OFF ◑ : LAMP BLINK

* Note *

If the Set doesn't work (No power), check the Thermal fuse of Terminal block OPEN or SHORT with Multimeter.

* Measure the Thermal fuse housing PIN#1 ~ 2 :
OPEN(disconnection) -> defective product

Outdoor LED Display Error and Check Method (9K/12K)

LED PATTERN			DESCRIPTION
YEL	GRN	RED	
○	○	○	Power off/VDD NG
●	●	●	Power ON reset(1sec)
○	⊙	●	Normal Operation
○	○	●	Abnormal Communication (Indoor↔Outdoor)
○	●	●	
○	○	⊙	IPM Over Current(O.C) Error
○	⊙	○	Comp Starting Error
○	●	○	EEPROM Data Error (no data)
○	●	⊙	DC-Link Voltage Under/Over Error
			PFC Over Load Error
			Over Voltage Protection Error
⊙	○	⊙	OUT-TH(Outdoor Temperature) Sensor Error
⊙	○	●	DIS-TH(Discharge Temperature) Over Error
⊙	⊙	○	DIS-TH(Discharge Temperature) Sensor Error
⊙	⊙	●	Current Sensor Error
			Heatsink Sensor Error
			Input Current Sensor Error
⊙	●	○	Comp V_limit/I_limit Error
			Heatsink Over Temperature Error
⊙	●	⊙	CON-TH(Cond Temperature) Sensor Error
⊙	●	●	Time out Comm. (Inv Micom↔Main Micom)
●	○	○	Fan Error(Outdoor)
●	○	⊙	EEPROM Data Error (Main Micom↔Inv Micom)
●	○	●	Comp Wire Missing Error
●	⊙	○	Prohibit Operation Condition Error (Heating)
			Prohibit Operation Condition Error (Cooling)
●	⊙	⊙	DC-Link Voltage Sensor Error
			AC Input Voltage Sensor Error
●	⊙	●	AC Input I_Limit Trip Error
●	●	○	Gas Leak Error
			EEV or Valve Close error-Self diagnosis
○	⊙	⊙	Test Operation at Cooling Mode
⊙	⊙	⊙	Test Operation at Heating Mode

● LED ON, ○ LED OFF, ⊙ LED BLINKING

Outdoor LED Display Error and Check Method (18K/24K/30K)

LED PATTERN			DESCRIPTION
YEL	GRN	RED	
○	○	○	Power off/VDD NG
○	○	⊙	IPM OVER CURRENT (O.C)
○	○	●	ABNORMAL SERIAL COMMUNICATION (DISPLAY BOARD : INDOOR ↔ OUTDOOR)
○	●	●	
○	⊙	●	NORMAL OPERATION
○	⊙	○	COMP STARTING ERROR
○	●	⊙	DC-LINK VOLTAGE UNDER/OVER ERROR
			PFC OVERLOAD/H/W/ DC LINK OVER
⊙	○	⊙	OUT-TH(OUTDOOR TEMPERATURE) SENSOR ERROR
⊙	○	●	DIS-TH(DISCHARGE TEMPERATURE) OVER ERROR
⊙	⊙	○	DIS-TH(DISCHARGE TEMPERATURE)SENSOR ERROR
⊙	⊙	●	CURRENT SENSOR ERROR
			HEAT SINK SENSOR/INPUT CURRENT SENSOR ERROR
⊙	●	○	COMP V LIMIT ERROR
			HEAT SINK OVER HEAT
⊙	●	⊙	COIL TEMP SENSOR SENSOR ERROR (DUAL/SINGLE)
⊙	●	●	1 MIN TIME OUT COMM (MAIN MICOM INV MICOM)
○	●	○	EEPROM DATA ERROR
●	○	○	FAN ERROR
●	○	⊙	OTP ERROR
●	○	●	COMP ROTATION ERROR
●	⊙	○	OPERATION CONDITION SECESSION (DUAL ONLY)
●	⊙	⊙	DC-LINK VOLTAGE SENSOR ERROR/ INPUT VOLTAGE SENSOR ERROR
●	⊙	●	I-TRIP ERROR/PFC OVER CURRENT
●	●	○	GAS LEAK/EEV OR VALVE ERROR-SELF DIAGNOSIS/HIGH PRESSION BLOCK
●	●	⊙	AC LINE ZERO CROSS SIGNAL OUT
●	●	●	POWER ON RESET (1SEC)
⊙	○	○	CAPACITY MISS MATCH
○	⊙	⊙	TEST OPERATION COOLING MODE
⊙	⊙	⊙	TEST OPERATION HEATIN G MODE

● LED ON, ○ LED OFF, ⊙ LED BLINKING

3-3 Setting Option Setup Method

e) Option No. :

Note :

SEG1, SEG7, SEG13, SEG19 need not to be pressed in, so in fact the Option No. we should press in is as below.

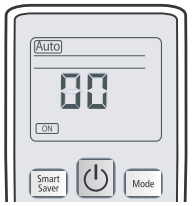
30 00 07 C2 6C 83 10 00 00 00 20 00 00 00 00 00 00 10 00 00

SEG1	SEG2	SEG3	SEG4	SEG5	SEG6	SEG7	SEG8	SEG9	SEG10	SEG11	SEG12	SEG13	SEG14	SEG15	SEG16	SEG17	SEG18	SEG19	SEG20	SEG21	SEG22	SEG23	SEG24
0	3	0	0	0	0	1	7	C	2	6	C	2	8	3	1	0	0	3	0	0	0	0	0
SEG25	SEG26	SEG27	SEG28	SEG29	SEG30	SEG31	SEG32	SEG33	SEG34	SEG35	SEG36	SEG37	SEG38	SEG39	SEG40	SEG41	SEG42	SEG43	SEG44	SEG45	SEG46	SEG47	SEG48
0	2	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	1	3	0	0	0	0	0

Step 1

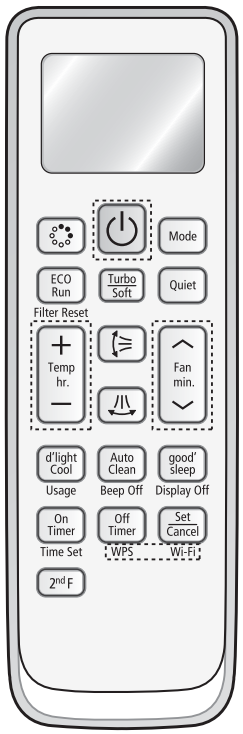
Enter the Option Setup mode.

1. Tack out the batteries of remote control.
2. Press the temperature (+ Temp −) button simultaneously and insert the battery again.
3. Make sure the remote control display shown as 00.

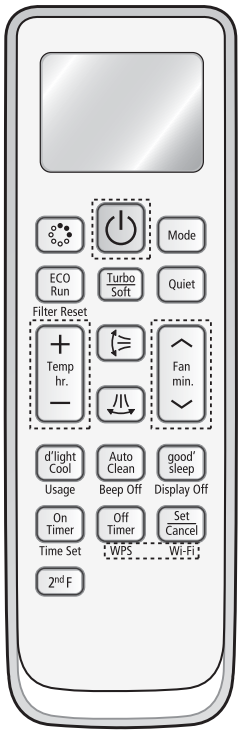


Step 2

Enter the Options Setup mode and select your options asscording to the following procedure.



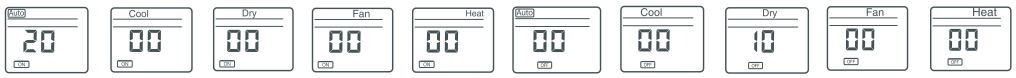
	Feature	Display
1	The default value is 00. Every time you push the Mode button, the display panel reads ON Auto ➡ Cool ➡ Dry ➡ Fan ➡ Heat , OFF Auto ➡ Cool ➡ Dry ➡ Fan ➡ Heat repeatedly.	Auto 00 ON
2	Push the Temp button to set the display panel to 3. Every time you push the Temp button, the display panel reads 0➡1➡2➡3➡ ..... ➡9➡A➡b➡c➡d➡E➡F repeatedly.	Auto 30 ON
3	Push the Mode button to Cool 00. Every time you push the Temp button, the display panel reads 0➡1➡2➡3➡ ..... ➡9➡A➡b➡c➡d➡E➡F repeatedly.	Cool 00 ON
4	Push the Mode button to Dry 00. Push the Temp button to set the display panel to 7. Every time you push the Temp button, the display panel reads 0➡1➡2➡3➡ ..... ➡9➡A➡b➡c➡d➡E➡F repeatedly.	Dry 07 ON
5	Push the Mode button to Fan 00. Push the Temp button to set the display panel to C. Every time you push the Temp button, the display panel reads 0➡1➡2➡3➡ ..... ➡9➡A➡b➡c➡d➡E➡F repeatedly.	Fan C0 ON
6	Push the Temp button to set the display panel to 2. Every time you push the Temp button, the display panel reads 0➡1➡2➡3➡ ..... ➡9➡A➡b➡c➡d➡E➡F repeatedly.	Fan C2 ON



	Feature	Display
7	Push the Mode button to Heat 00. Push the Fan button to set the display panel to 6. Every time you push the Fan button, the display panel reads 0→1→2→3→ ..... →9→A→b→c→d→E→F repeatedly.	Heat 60
8	Push the Fan button to set the display panel to 8. Every time you push the Fan button, the display panel reads 0→1→2→3→ ..... →9→A→b→c→d→E→F repeatedly.	Heat 6C
9	Push the Mode button to Auto 00. Push the Fan button to set the display panel to 8. Every time you push the Fan button, the display panel reads 0→1→2→3→ ..... →9→A→b→c→d→E→F repeatedly.	Auto 80
10	Push the Fan button to set the display panel to 3. Every time you push the Fan button, the display panel reads 0→1→2→3→ ..... →9→A→b→c→d→E→F repeatedly.	Auto 83
11	Push the Mode button to Cool 00. Push the Fan button to set the display panel to 1. Every time you push the Fan button, the display panel reads 0→1→2→3→ ..... →9→A→b→c→d→E→F repeatedly.	Cool 10
12	Push the Mode button to Dry 00.	Dry 00
13	Push the Mode button to Fan 00.	Fan 00
14	Push the Mode button to Heat 00.	Heat 00

Step 3 Upon completion of the selection, check you made right selections.

Press the Mode (Mode) Selection key to set the display part and check the display part.
→ The display part shows like below when each time you press Mode button.

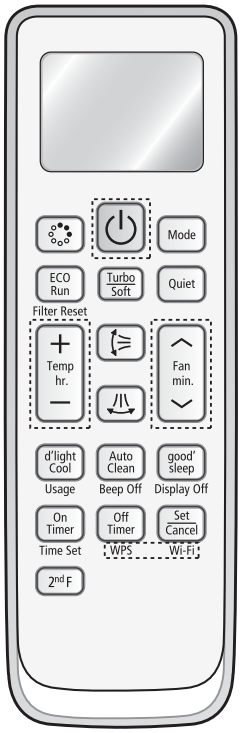


Step 4 Pressing the ON/OFF button (⏻) .

When pressing the operation ON/OFF key with the direction of remote control for unit, the sound "Ding" or "Diriring" is heard and the OPERATION ICON(≡) lamp of the display is flickering at the same time, then the input of option is completed.
(If the deriving sound isn't heard, try again pressing the ON/OFF button.)

Step 5

Enter the Options Setup mode and select your options asscording to the following procedure.



	Feature	Display
1	Step 1 (Enter the Option Setup mode) is executed. (Seg25 ~ 48 for setting remote control Setup)	
2	Push the Mode button to set the display panerl to 2. Every time you push the button, the display panel reads 0 → 1 → 2 → 3 →··· 9 → A → b → c → d → E → F repeatedly.	
3	Push the Mode button to	
4	Push the Mode button to	
5	Push the Mode button to	
6	Push the Mode button to	
7	Push the Mode button to .	
8	Push the Mode button to .	
9	Push the Mode button to .	
10	Push the Mode button to set the display panerl to 1. Every time you push the button, the display panel reads 0 → 1 → 2 → 3 →··· 9 → A → b → c → d → E → F repeatedly.	
11	Push the Mode button to .	
12	Push the Mode button to .	

Step 6 **Upon completion of the selection, check you made right selections.**

Press the Mode (Mode) Selection key to set the display part and check the display part.
→ The display part shows like below when each time you press Mode button.

Step 7 **Pressing the ON/OFF button ( ) .**

When pressing the operation ON/OFF key with the direction of remote control for unit, the sound "Ding" or 'ring"
and the OPERATION ICON(≡) lamp of the display is flickering at the same time, then the input of option is completed.
(If the deriving sound isn't heard, try again pressing the ON/OFF button.)

Step 8 **Unit operation test-run.**

First : Remove the battery from the remote control.
Second : Re-insert the battery into the remote control.
Third : Press ON/OFF key with the direction of remote control for set.

■Error mode
1. If all lamps of indoor unit are flickering, Plug out, plug in power plug again and press ON/OFF key to retry.
2. If the unit is not working properly or all lamps are continuously flickering after setting the option code, the correct option code is set up for its model.

□**Option Items**

Model	SEG 1-6	SEG 7-12	SEG 13-18	SEG 19-24	SEG 25-30	SEG 31-36	SEG 37-42	SEG 43-48	SEG 49-54	SEG 55-60	SEG 61-66	SEG 67-72
AR09HSFSJWK/CV	010025	176A69	271920	372534	020000	100000	200001	300000	033F38	102637	200000	300000
AR12HSFSJWK/CV	010025	166A7A	272328	374634	020000	100000	200001	300000	03453A	10353F	200000	300000
AR18HSFSJWK/CV	010025	176A38	27323C	371634	020000	100000	200001	300000	033B44	112F36	200000	300001
AR24HSFSJWK/CV	010025	156A7D	274650	372734	020000	100000	200001	300000	033942	11292E	200000	300000

Step 6 Upon completion of the selection, check you made right selections.

Press the Mode (Mode) Selection key to set the display part and check the display part.
→ The display part shows like below when each time you press Mode button.

Step 7 Pressing the ON/OFF button ( ).

When pressing the operation ON/OFF key with the direction of remote control for unit, the sound "Ding-Ding" or and the OPERATION/IONIC ON(≡) lamp of the display is flickering at the same time, then the input of option is completed. (If the deriving sound isn't heard, try again pressing the ON/OFF button.)

Step 8 Unit operation test-run.

First Remove the battery from the remote control.
Second: Re-insert the battery into the remote control.
Third: Press ON/OFF key with the direction of remote control for set.

■ Error mode

1. If all lamps of indoor unit are flickering, Plug out, plug in power plug again and press ON/OFF key to retry.
2. If the unit is not working properly or all lamps are continuously flickering after setting or re-the option code is set up for its model.

□ **Option Items**

Model	SEG 1-6	SEG 7-12	SEG 13-18	SEG 19-24	SEG 25-30	SEG 31-36	SEG 37-42	SEG 43-48	SEG 49-54	SEG 55-60	SEG 61-66	SEG 67-72
AR09HSFSJWK/CV	010025	176A69	271920	372534	020000	100000	200001	300000	033F38	102637	200000	300000
AR12HSFSJWK/CV	010025	166A7A	272328	374634	020000	100000	200001	300000	03453A	10353F	200000	300000
AR18HSFSJWK/CV	010025	176A38	27323C	371634	020000	100000	200001	300000	033B44	112F36	200000	300001
AR24HSFSJWK/CV	010025	156A7D	274650	372734	020000	100000	200001	300000	033942	11292E	200000	300000

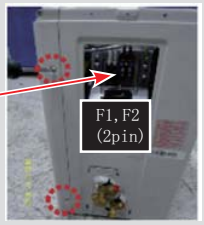
3-4 EEPROM Download (485 communication model)

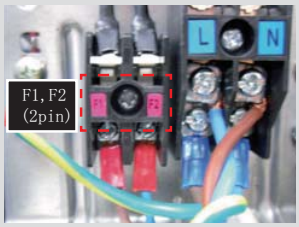
■ Method#1 : Using Communication line

1) Power off

2) Take off the side cover

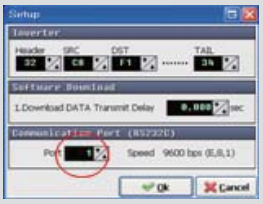
3) Connect PC-Download Jig-PBA



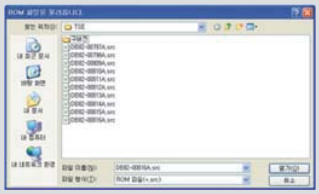


4) Execute the Inverter Download program

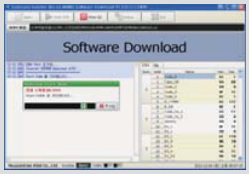
5) Select COM Port and connect



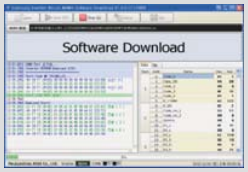
6) Open the file (*.src)



7) Click the Start button and reset the power

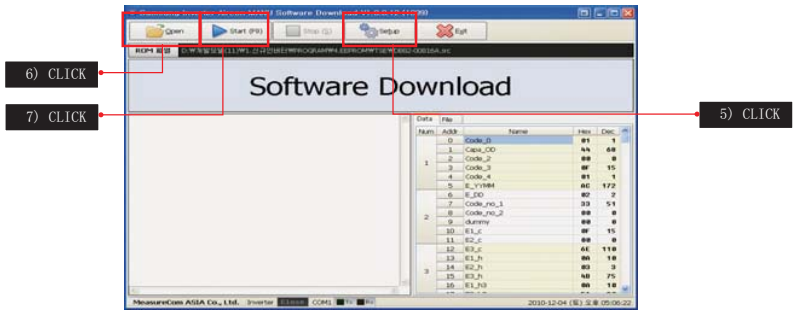


Reset
power



Waiting down load

Download

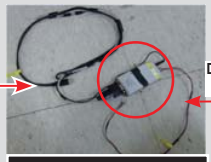


■ Method#2 : Using Serial line

1) Power off

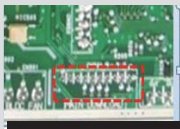
2) Take off the Cabinet : Check the LED off

3) Connect PC-Download Jig-PBA



RS 232 to Serial Download Converter

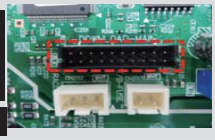
Download connector (10pin)



PIN# 1:RXD, 2:TXD, 9:GND, 10:VCC

Download connector (10pin,Black)
1)DB41-01010A : CN201
2)DB41-01129A : CN201
3)DB41-01023A : CN512
4)DB41-01081B : CN37

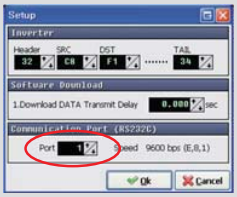
Download connector (20pin, Black)
1)DB41-01227A : CN201
2)DB41-01228A : CN201



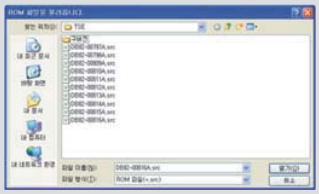
PIN# 1:RXD, 2:TXD, 9:GND, 10:VCC

4) Execute the Inverter Download program

5) Select COM Port and connect



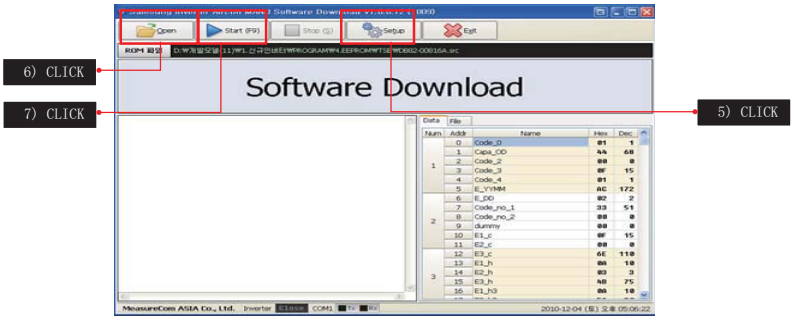
6) Open the file(*.src)



7) Click the Start button

Waiting down load

Download

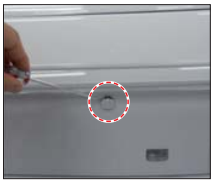
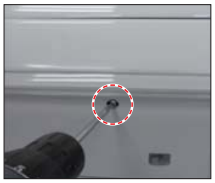


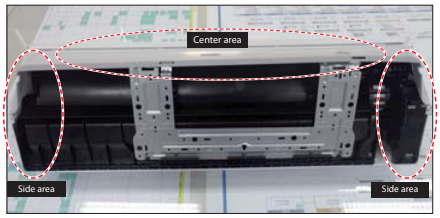
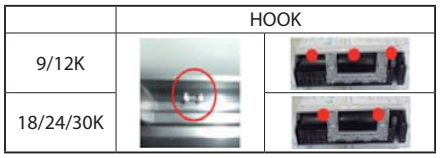
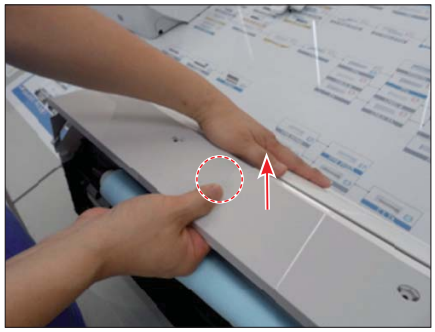
4. Disassembly and Reassembly

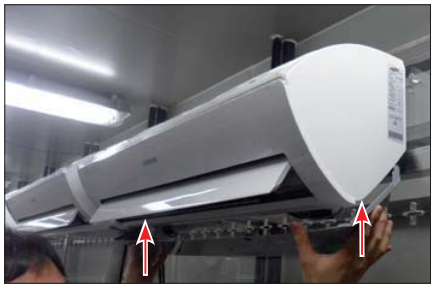
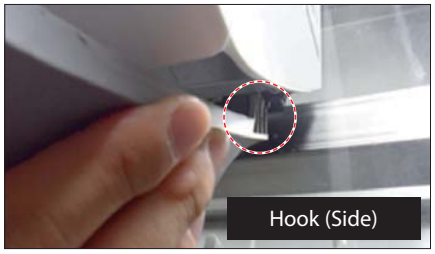
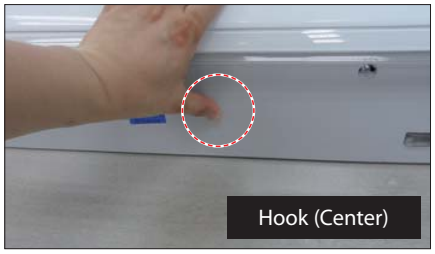
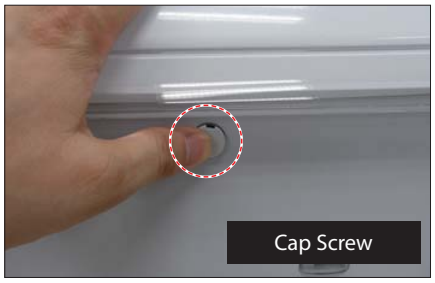
■ Necessary Tools

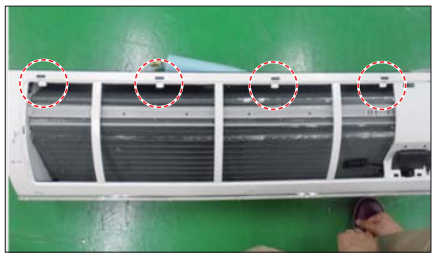
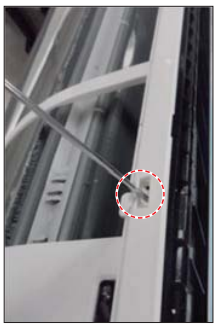
Item	Remark
+SCREW DRIVER	
MONKEY SPANNER	
- SCREW DRIVER	

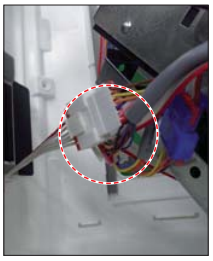
4-1. Indoor Unit

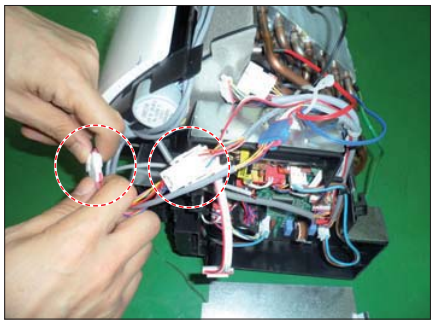
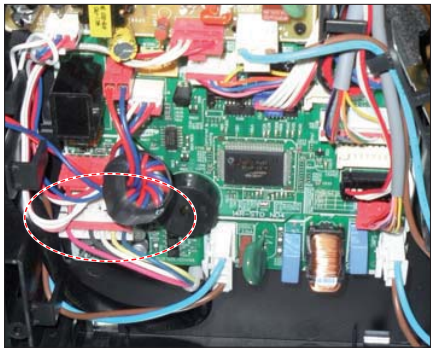
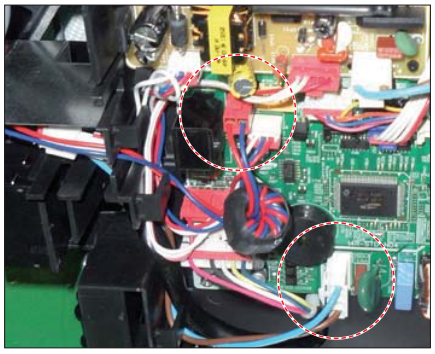
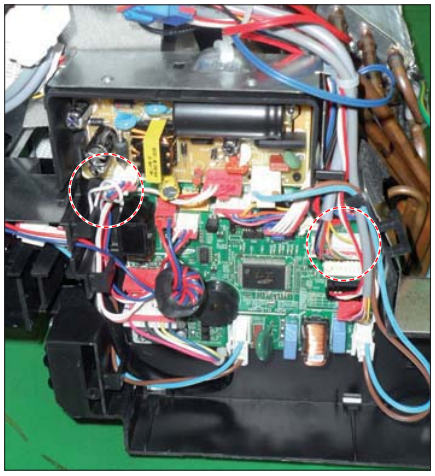
No	Parts	Procedure	Remark
1	PANEL-FRONT	1) Stop the driving of air conditioner and shut off main power supply.	
		2) Detach FILTER PRE from the PANEL FRONT.	
		3) Cover Panel is assembled on bottom of indoor unit as shown in the figure. Remove the Cap Screw as shown on the right side and then remove the screw and separate the Cover Panel.	  

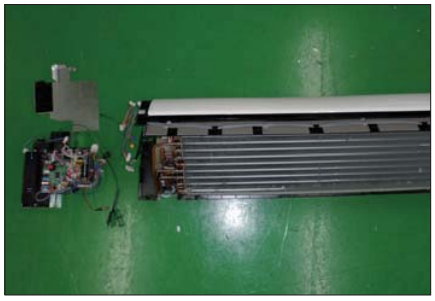
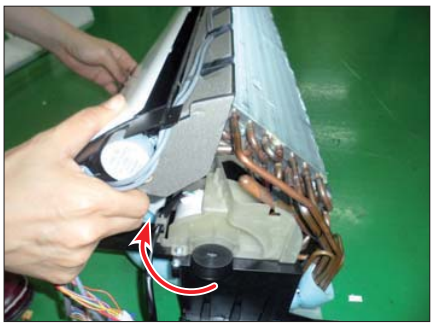
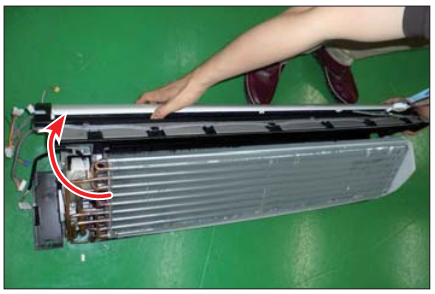
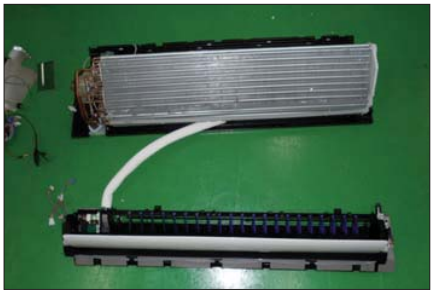
No	Parts	Procedure	Remark
		4) Cover Panel is fixed to body by Hook in center area and side area.	
			
		5) Separate the hook after pushing both end of Cover Panel as shown in the figure. (Watch out for the damage of the hook)	
		6) Raise front part upward obliquely as shown in the figure and then remove the hooks.	

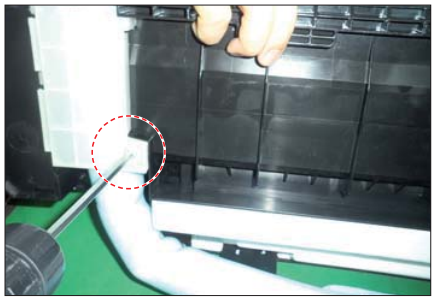
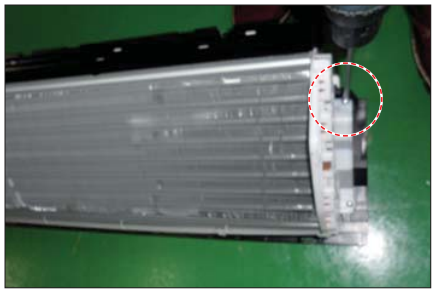
No	Parts	Procedure	Remark
		Caution: Assembly of Cover Panel after service end. - Reassembly is in the reverse order of the removal. - Piping and drain hose must be careful not to damage and Progress must be done with both hands.	  Hook (Side)  Hook (Center) Screw  Cap Screw

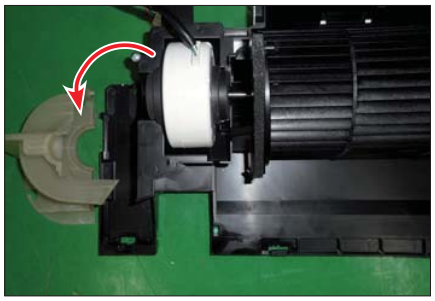
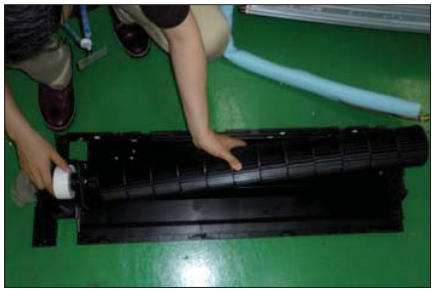
No	Parts	Procedure	Remark
		7) To detach the PANEL-FRONT from the main frame, unfasten 2 screws at the bottom. (use + Screw Driver)	
		8) To detach the COVER-PANEL from the main frame, loosen 4 HOOK Structures. When separate the hook : Use the (-) screw Driver. (-)Screw Driver Insert the hook and then pull the hook as shown on the right side. (Watch out for the damage of the hook)	 

No	Parts	Procedure	Remark
		9) Remove the Panel Frame from the Main Frame as shown on the right side.	
		10) Remove the WIFI KIT connector. WIFI KIT connector is located of Panel Front. (For model with WIFI KIT)	

No	Parts	Procedure	Remark
2	CONTORL IN	5) Loosen Stepping MOTOR Wire / BLADE Wire.	
		6) Loosen MOTOR Wire. ⚠ Caution: When you separate the connector, pull pressing the locking button.	
		7) Loosen the terminal block wires. ⚠ Caution: When you separate the connector, pull pressing the locking button.	
		8) Loosen the Thermistor wire connector, Display wire connector. ⚠ Caution: When you separate the connector, pull pressing the locking button.	

No	Parts	Procedure	Remark
5	EVAPORATOR	9) Take off the CASE-CONTROL from the main frame after loosen the remaining connector. ⚠ Caution: When you separate the connector, pull pressing the locking button.	
3	TRAY DRAIN	1) To detach TRAY-DRAIN from the main frame, pull the bottom of the TRAY-DRAIN towards you.	  

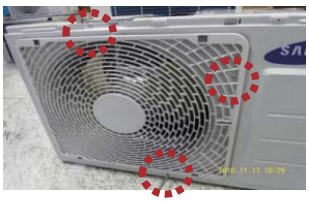
No	Parts	Procedure	Remark
4	Evaporator	1) Detach the HOLDER PIPE.	
		2) Unfasten the screw at the left side. (use + Screw Driver)	
		3) Unfasten the screw at the right side. (use + Screw Driver)	
		4) To detach Evaporator from the main frame, pull the bottom of the Evaporator towards you.	

No	Parts	Procedure	Remark
5	FAN MOTOR & CROSS FAN	1) Unfasten the screw. (use + Screw Driver)	
		2) Detach the FAN Motor case.	
		3) Unfasten the screw a little. (use + Screw Driver)	
		4) Pull the CROSS-FAN to the left side.	

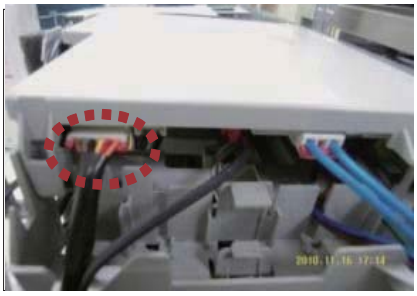
No	Parts	Procedure	Remark
6	Assy SPI Lamp	1) Remove the Assy SPI Lamp from the Back Body as shown on the right side. **Caution** - Confirm Seal of backside necessarily after replace of Assy SPI Lamp. - Seal should be close adhesion to SPI Lamp. - Measure as shown on the right side since replace. (If the seal is not close adhesion perfectly : Defectiveness can happen)	

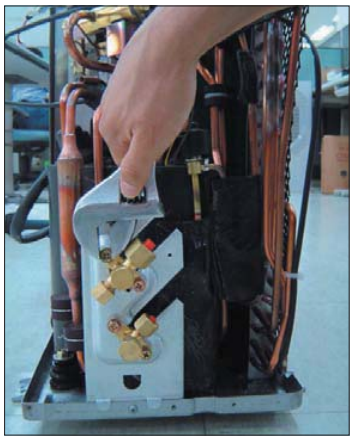
4 2 Outdoor Unit

No	Parts	Procedure	Remark
1	Common Work	1) Loosen 1 fixing screw(CCW) of the Cover-Side. (Use +Screw Driver.)	
		2) Loosen each 5 screws(CCW) on both right and left Cabinet Side edges and a fixing screw on the Cabinet Front lower to detach the Cabinet Front. (Use +Screw Driver.)	
		3) Detach the Cabinet Upper li e the picture.	
		4) Loosen 2 screw(CCW) fixed to assemble Plate Control Out with Cabinet-Side RH. (Use +Screw Driver.)	

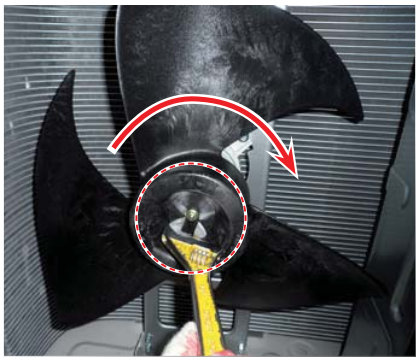
No	Parts	Procedure	Remark
1	Common Work	5) Loosen 2 screw(CCW) on the right side of Cabinet Front. (Use □Screw Driver)	
		6) Loosen 2 screw(CCW) on the left side of Cabinet Front. (Use □Screw Driver)	
		7) Loosen 3 screw(CCW) on the front side of Cabinet Front. (Use □Screw Driver)	

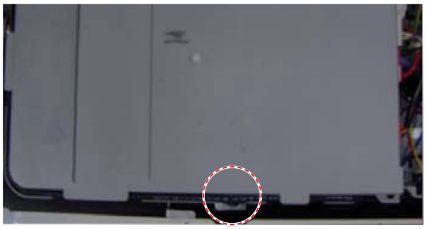
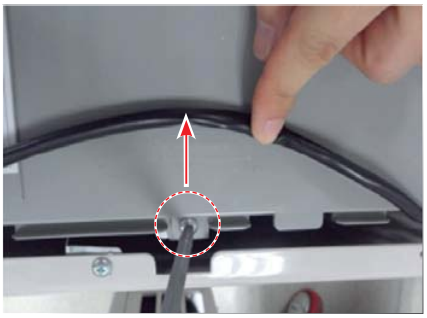
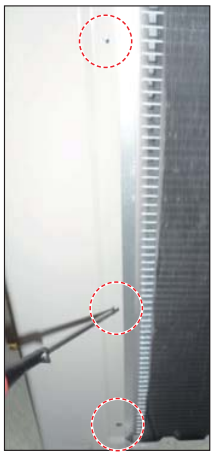
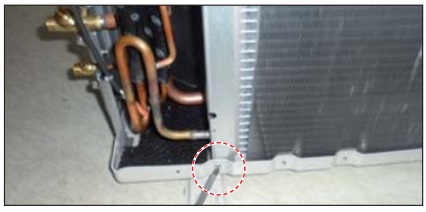
No	Parts	Procedure	Remark
		8) Loosen 3 fixing screws(CCW) on the rear side of Cabinet-Side RH. (Use +Screw Driver.)	
		9) Loosen 3 screws(CCW) fixed to assemble Bracket Valve with Cabinet-Side RH. (Use +Screw Driver.)	

No	Parts	Procedure	Remark
2	Ass'y Control Out	1) Detach the Motor Wire from the PCB of Ass'y Control Out.	
		2) Detach several connectors from the PCB of Ass'y Control Out.	
		3) Detach 2 Connect Wires from Reactor.	
		4) Loosen 1 screw(CCW) fixed to assemble Ass'y Control Out with Partition. (Use +Screw Driver.)	

No	Parts	Procedure	Remark
3	Fan & Motor	1) Release Nut at Fan Boss 2) Release 3 screws st Motor Bracket. 3) Detach Motor Wire from the Assy Control Out.	
4	Heat Exchanger	1) Loosen 1 fixing screws(CCW) on both sides. (Use +Screw Driver.) 2) Disassemble the pipes in both inlet and outlet with welding torch. 3) Detach the Heat Exchanger. ⚠ Before you disassemble the pipes and Condenser, be sure that there should be no refrigerant remained in the unit.	
5	Ass'y Valve 4-Way & Ass'y Valve EEV	1) Loosen 4 bolts(CCW) fixed to assemble Valve Service with Bracket Valve like the picture on the right side. (Use Monkey Spanner.) 2) Disassemble the pipes assembled the suction and discharge sides of the Compressor with welding torch.	
6	Compressor	1) Loosen the Nut(CCW) of Terminal Cover. (Use Monkey Spanner.) 2) Detach the Terminal Cover and detach the Connect Comp Wire from Compressor. 3) Disassemble the Felt Comp Sound. 4) Loosen the 3 bolts(CCW) at the bottom of Compressor like the picture on the right side. (Use Monkey Spanner.)	

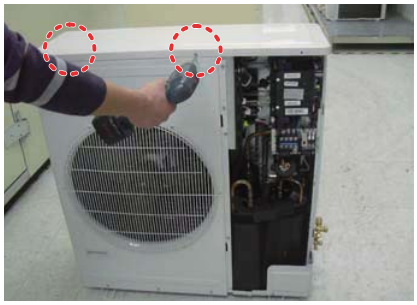
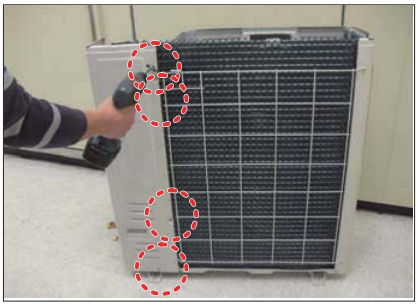
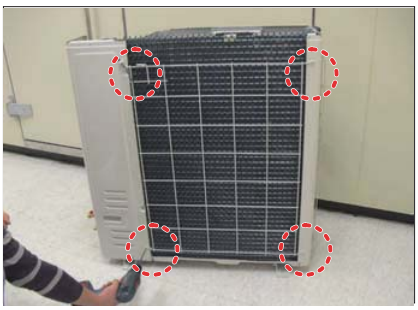
No	Parts	Procedure	Remark
		3) Loosen the 4 screws and detach the condbar.	
		4) Loosen fixing screws from the Cabi Front Lh and detach it.	
		5) Loosen fixing screws from the Cabi Side Rh and detach it.	

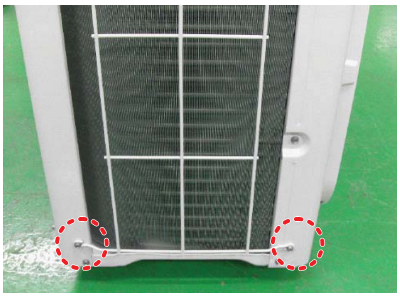
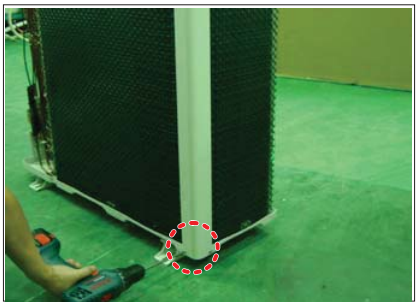
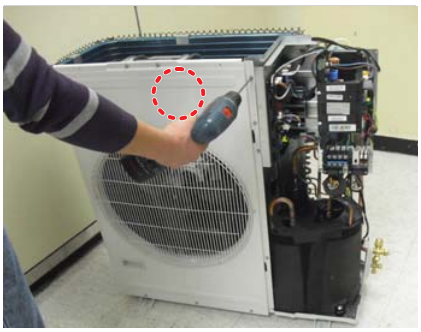
No	Parts	Procedure	Remark
2	Fan & Motor	1) Detach the Nut Flange like the picture on the right side.(Turn clockwise because the screw is left-handed.) (Use Monkey Spanner.)	
		2) Detach the Fan Propeller. 3) Loosen 4 fixing screws to detach the Motor. (Use Monkey Spanner.)	
		4) Disconnect the wire between Ass'y Control Out and Motor.	
		5) Loosen 2 fixing bolts and detach the Bracket Motor.(Use Monkey Spanner	

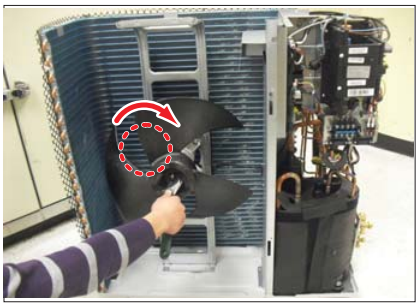
No	Parts	Procedure	Remark
3	Ass'y Control Out	1) To remove the Cover control box : Pull the motor wire is allow sufficient space as shown on the right side and then remove the screw. 2) Detach several connectors from the Ass'y Control Out. 3) Detach several connectors from the PCB of Ass'y Control Out.	 
4	Heat Exchanger	1) Release the refrigerant at first. 2) Loosen fixing screw on both sides. 3) Disassemble the pipes in both inlet and outlet with welding torch. 4) Detach the Heat Exchanger.	 

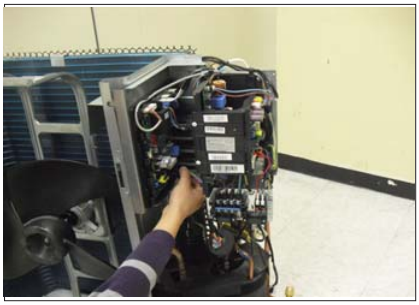
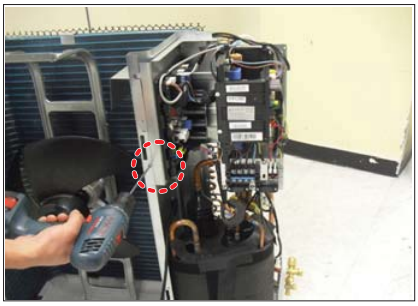
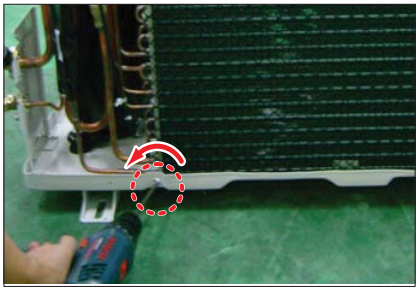
No	Parts	Procedure	Remark
5	Compressor	1) Loosen the fixing nut and detach the Compressor Lead Wire. (Use Monkey Spanner.)	
		2) Loosen the bolts at the bottom of Compressor like the picture on the right side. (Use Monkey Spanner.)	

■ AR24HSFSHWKXCV

No	Parts	Procedure	Remark
1	Common Work	1) Loosen 2 fixing screws of the Cabi Front Rh and detach the Cabi Front Rh.	
		2) Loosen each 8 fixing screws and detach the Cabi Top Cover.	
		3) Loosen 17 fixing screws from the Cabi Front Rh.	
			
		4) Loosen 4 fixing screws from cond-bar.	

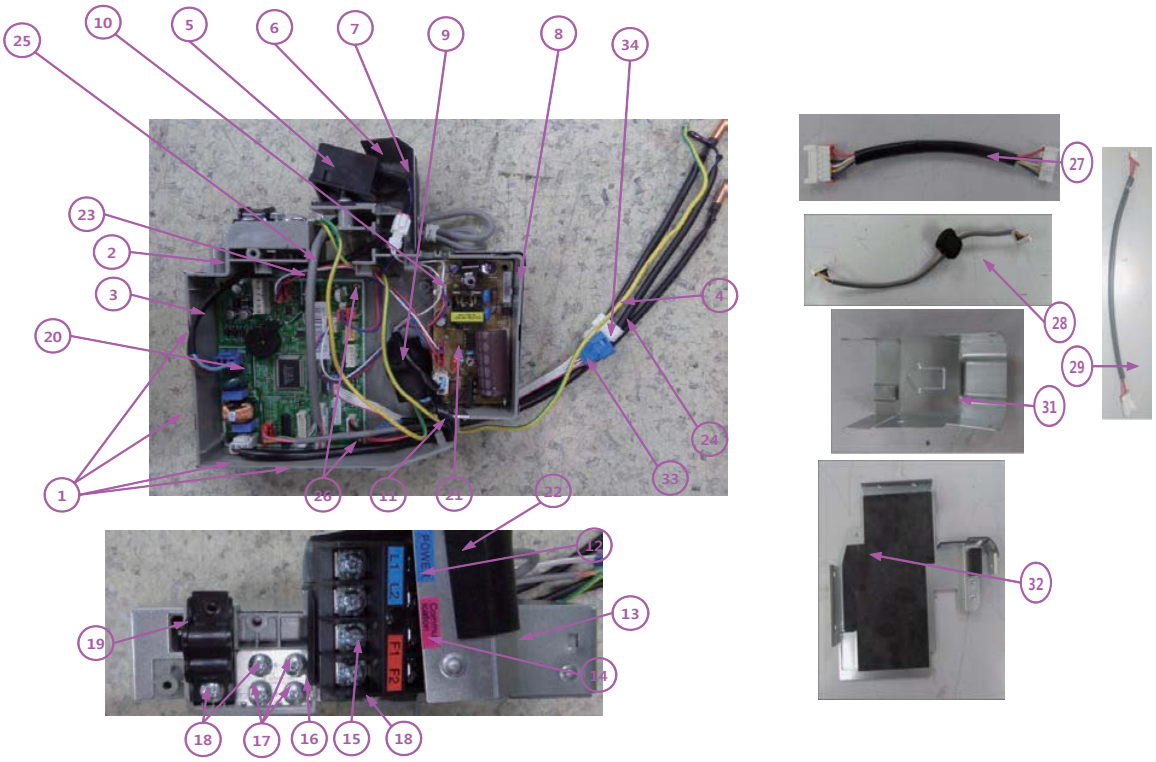
No	Parts	Procedure	Remark
		5) Loosen the 4 screws and detach the cond-bar(Right).	
		6) Loosen the fixing screws and detach the Cabi Back Lf.	
		7) Loosen 13 fixing screws of the Cabi Front Lf and detach it.	

No	Parts	Procedure	Remark
2	Fan & Motor	1) Detach the Nut Flange like the picture on the right side.(Turn clockwise because the screw is left-handed.) (Use Monkey Spanner.)	
		2) Detach the Fan Propeller. 3) Loosen 4 fixing screws to detach the Motor.(Use Monkey Spanner.)	
		4) Disconnect the wire between Ass'y Control Out and Motor.	
		5) Loosen 2 fixing bolts and detach the Bracket Motor.(Use Monkey Spanner.)	

No	Parts	Procedure	Remark
3	Ass'y Control Out	1) Detach several connectors from the Ass'y Control Out. 2) Detach several connectors from the PCB of Ass'y Control Out. 3) Pull up the Ass'y Control Out.	 
4	Heat Exchanger	1) Release the refrigerant at first. 2) Loosen fixing screw on both sides. 3) Disassemble the pipes in both inlet and outlet with welding torch. 4) Detach the Heat Exchanger.	 

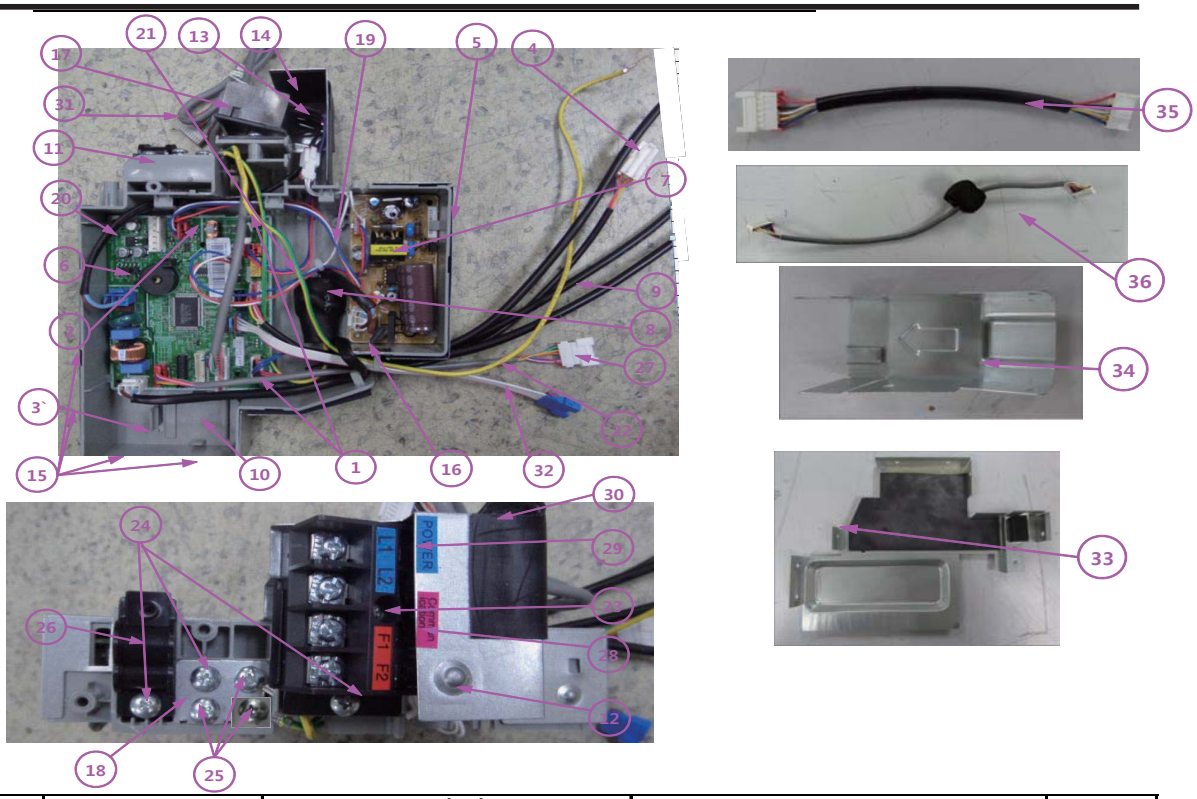
No	Parts	Procedure	Remark
5	Compressor	1)Loosen the fixing nut and detach the Compressor Lead Wire. (Use Monkey Spanner.)	
		3) Loosen the 3 bolts at the bottom of Compressor like the picture on the right side.(Use Monkey Spanner.)	

5-2 ASSY CONTROL IN -9K/12K



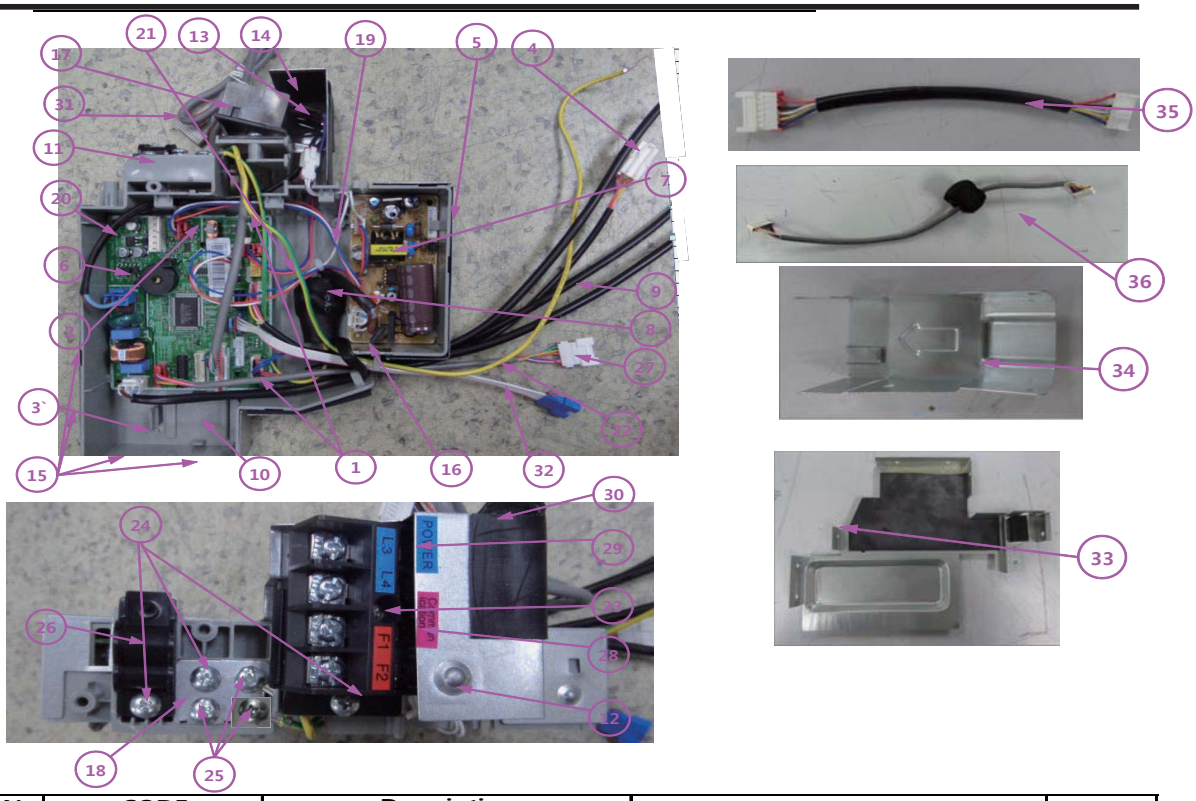
No	CODE	Description	Spec	Q'TY
	DB93-14734E	ASSY CONTROL IN		
1	DB63-03553C	Aluminum SHEET	10x10xT0.07, AL SHEET	4
2	DB61-05826B	CASE-CONTROL IN	CASE-CONTROL IN	1
3	DB93-14203A	POWER WIRE	T/B-main(power)	1
4	DB93-14245A	EARTH WIRE	EARTH WIRE	1
5	DB65-00326A	TERMINAL BLOCK	TERMINAL BLOCK	1
6	DB62-11656F	SEAL CUTT	PVC, BLACK, T1, W54	1
7	DB62-11680A	SEAL CONTROL	FLOCKED, BLACK, T1, W50, 54	1
8	DB68-02809A	ASSY-LABEL	ASSY-LABEL	1
9	DB93-06677A	COMMUNICATION WIRE	T/B-main(485)	1
10	DB93-14207A	FUSE WIRE	power-main(12V 5V)	1
11	DB63-03553D	Aluminum SHEET	22x22xT0.07, AL SHEET	1
12	DB68-33293A	ASSY-LABEL	ASSY-LABEL	1
13	DB61-05957A	PLATE-CONTROL IN	F03/04	1
14	DB68-33292A	ASSY-LABEL	ASSY-LABEL	1
15	DB91-00309A	SCREW	M3, L25, ZPC(WHT), SWRCH18A	1
16	DB61-05812A	PLATE	PLATE	1
17	6009-001001	SCREW	TH, M4, L10, ZPC(WHT), SWRCH18A	3
18	6002-000231	SCREW	M4, L12, ZPC(WHT), SWRCH18A	3
19	DB61-05871A	HOLDER-WIRE CLAMP	HOLDER-WIRE CLAMP	1
20	DB92-02873C	MAIN PBA	STD4	1
21	DB92-02861A	POWER PBA	STD11W	1
22	DB62-11793A	SEAL CASE-LEFT	SEAL CASE-LEFT	1
23	DB93-14208A	ASSY CONNECTOR WIRE-DC	power-main(310V 19V)	1
24	DB95-05163A	ASSY THERMISTOR IN	sensor 1room, 2evap	1
25	DB93-14221A	ASSY CONNECTOR WIRE-DC	FJM	1
26	6002-000630	SCREW	SCREW	2
27	DB93-14724A	ASSY CONNECTOR WIRE-DC	BLDC	1
28	DB93-14209A	ASSY CONNECTOR WIRE-DC	DISPLAY MOTOR	0
28	DB93-14209B	ASSY CONNECTOR WIRE-DC	DISPLAY MOTOR	1
29	DB93-14723A	ASSY CONNECTOR WIRE-DC	STEP MOTOR	1
30	DB93-04695A	ASSY CONNECTOR WIRE-DC	SPI	0
31	DB61-05965A	PLATE CONTROL-UP	PLATE CONTROL-UP	1
32	DB90-07859A	ASSY PLATE CONTROL	RIGHT	1
33	DB93-14205A	ASSY CONNECTOR WIRE-DC	Step-main(Left)	0
34	DB93-14211A	ASSY CONNECTOR WIRE-DC	WIFI	1

5-2 ASSY CONTROL IN-18K



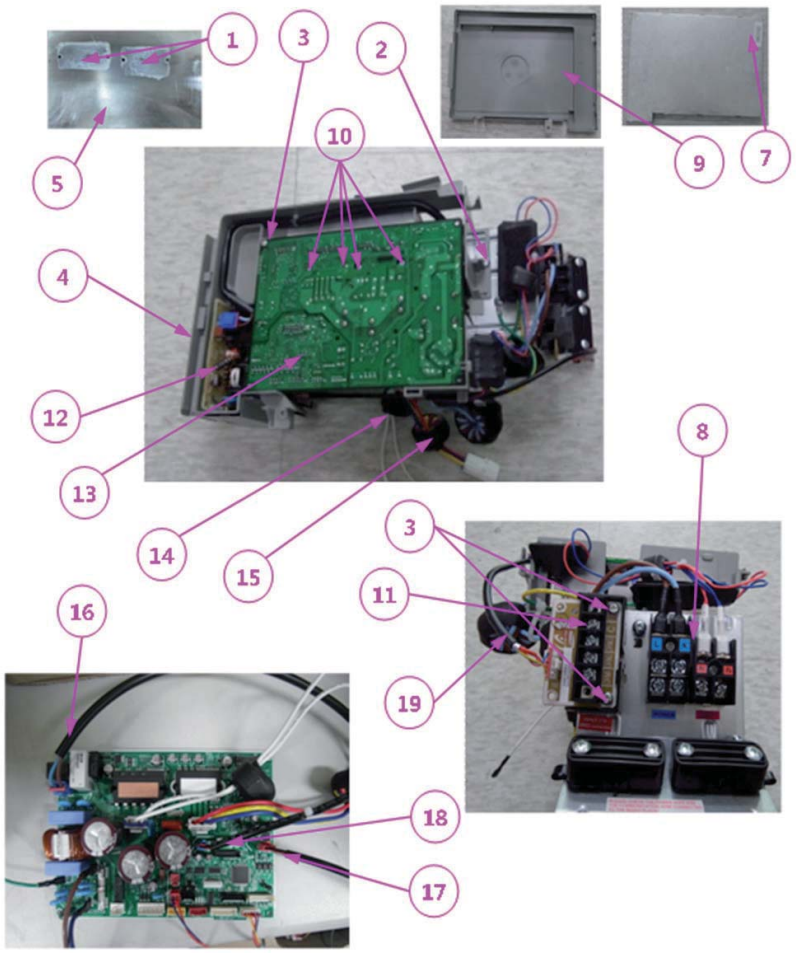
No	CODE	Description	Spec	Q'TY
	DB93-14738F	**ASSY CONTROL IN**		**1**
1	6002-000630	ASSY-SCREW TAPPING	PBA-TAPPING	2
2	DB93-14208A	ASSY CONNECTOR WIRE-DC	power-main(310V 19V)	1
3	DB61-05891B	ASSY CASE CONTROL IN	F-05	1
4	DB93-14218A	ASSY CONNECTOR WIRE-DC	Step-main(up)	1
5	DB68-02809A	LABEL BAR CODE	LABEL BAR CODE	1
6	DB92-02873A	ASSY PCB MAIN IN	STD4	1
7	DB92-02861A	ASSY MODULE	11W	1
8	DB93-06677A	ASSY CONNECTOR WIRE-POWER	main-power(SMPS IN)	1
9	DB95-05163A	ASSY THERMISTOR IN	sensor 1room, 2evap	1
10	DB61-05891A	CASE CONTROL IN	F-05	**1**
11	DB61-05963A	SUPPORT-CONTROL	case sub	**1**
12	DB61-05961A	PLATE CONTROL-LEFT	PLATE CONTROL-LEFT	**1**
13	DB62-11670A	SEAL CONTROL-A	FLOCKED 52*65*T1 BLACK	**1**
14	DB62-11656C	SEAL CUTT	PVC 52*30*T1 BLACK	**0.052m**
15	DB63-03553C	SHEET-CONTROL	10x10xT0.07,AL SHEET	**4**
16	DB63-03553D	SHEET-CONTROL	22x22xT0.07,AL SHEET	**1**
17	DB65-00326A	TERMINAL BLOCK	TERMINAL BLOCK	**1**
18	DB61-05812A	PLATE CONTROL-SUB	PLATE CONTROL-SUB	**1**
19	DB93-14207A	ASSY CONNECTOR WIRE-DC SIGNAL	power-main(12V 5V)	**1**
20	DB93-14203A	ASSY CONNECTOR WIRE-POWER	T/B-main(power)	**1**
21	DB93-14238A	ASSY CONNECTOR WIRE-COMM	T/B-main(485)	**1**
22	DB93-14245A	ASSY CONNECTOR WIRE-EARTH	ASSY CONNECTOR WIRE-EARTH	**1**
23	DB91-00309A	ASSY-SCREW TAPPING	M3,L25,ZPC(WHT),SWRCH18A	**1**
24	6002-000231	SCREW-TAPPING	M4,L12,ZPC(WHT),SWRCH18A	**3**
25	6009-001001	SCREW-SPECIAL	TH,M4,L10,ZPC(WHT),SWRCH18A	**3**
26	DB61-05871A	HOLDER-WIRE	HOLDER-WIRE	**1**
27	DB93-14211A	ASSY CONNECTOR WIRE	FJM	**1**
28	DB98-33292A	ASSY-LABEL CAUTION	ASSY-LABEL CAUTION	**1**
29	DB98-33293A	ASSY-LABEL CAUTION	ASSY-LABEL CAUTION	**1**
30	DB62-11795A	SEAL CASE-LEFT	SEAL CASE-LEFT	1
31	DB93-14221A	ASSY CONNECTOR WIRE	FJM	1
32	DB93-14205A	ASSY CONNECTOR WIRE	LEFT-RIGHT	**0**
33	DB90-07796A	ASSY PLATE CONTROL	ASSY PLATE CONTROL	**1**
34	DB61-05965A	PLATE CONTROL-UP	PLATE CONTROL-UP	1
35	DB93-14724A	ASSY CONNECTOR WIRE-DC	BLDC MOTOR WIRE	1
36	DB93-14209B	ASSY CONNECTOR WIRE-DISPLAY	DISPLAY WIRE	1

5-2 ASSY CONTROL IN-24K



No	CODE	Description	Spec	Q'TY
	DB93-14738F	**ASSY CONTROL IN**		**1**
1	6002-000630	ASSY-SCREW TAPPING	PBA-TAPPING	2
2	DB93-14208A	ASSY CONNECTOR WIRE-DC	power-main(310V 19V)	1
3	DB61-05891B	ASSY CASE CONTROL IN	F-05	1
4	DB93-14218A	ASSY CONNECTOR WIRE-DC	Step-main(up)	1
5	DB68-02809A	LABEL BAR CODE	LABEL BAR CODE	1
6	DB92-02873A	ASSY PCB MAIN IN	STD4	1
7	DB92-02861A	ASSY MODULE	11W	1
8	DB93-06677A	ASSY CONNECTOR WIRE-POWER	main-power(SMPS IN)	1
9	DB95-05163A	ASSY THERMISTOR IN	sensor 1room, 2evap	1
10	DB61-05891A	CASE CONTROL IN	F-05	**1**
11	DB61-05963A	SUPPORT-CONTROL	case sub	**1**
12	DB61-05961A	PLATE CONTROL-LEFT	PLATE CONTROL-LEFT	**1**
13	DB62-11670A	SEAL CONTROL-A	FLOCKED 52*65*T1 BLACK	**1**
14	DB62-11656C	SEAL CUTT	PVC 52*30*T1 BLACK	**0.052m**
15	DB63-03553C	SHEET-CONTROL	10x10xT0.07,AL SHEET	**4**
16	DB63-03553D	SHEET-CONTROL	22x22xT0.07,AL SHEET	**1**
17	DB65-00326A	TERMINAL BLOCK	TERMINAL BLOCK	**1**
18	DB61-05812A	PLATE CONTROL-SUB	PLATE CONTROL-SUB	**1**
19	DB93-14207A	ASSY CONNECTOR WIRE-DC SIGNAL	power-main(12V 5V)	**1**
20	DB93-14203A	ASSY CONNECTOR WIRE-POWER	T/B-main(power)	**1**
21	DB93-14238A	ASSY CONNECTOR WIRE-COMM	T/B-main(485)	**1**
22	DB93-14245A	ASSY CONNECTOR WIRE-EARTH	ASSY CONNECTOR WIRE-EARTH	**1**
23	DB91-00309A	ASSY-SCREW TAPPING	M3,L25,ZPC(WHT),SWRCH18A	**1**
24	6002-000231	SCREW-TAPPING	M4,L12,ZPC(WHT),SWRCH18A	**3**
25	6009-001001	SCREW-SPECIAL	TH,M4,L10,ZPC(WHT),SWRCH18A	**3**
26	DB61-05871A	HOLDER-WIRE	HOLDER-WIRE	**1**
27	DB93-14211A	ASSY CONNECTOR WIRE	FJM	**1**
28	DB98-33292A	ASSY-LABEL CAUTION	ASSY-LABEL CAUTION	**1**
29	DB98-33293A	ASSY-LABEL CAUTION	ASSY-LABEL CAUTION	**1**
30	DB62-11795A	SEAL CASE-LEFT	SEAL CASE-LEFT	1
31	DB93-14221A	ASSY CONNECTOR WIRE	FJM	1
32	DB93-14205A	ASSY CONNECTOR WIRE	LEFT-RIGHT	**0**
33	DB90-07796A	ASSY PLATE CONTROL	ASSY PLATE CONTROL	**1**
34	DB61-05965A	PLATE CONTROL-UP	PLATE CONTROL-UP	1
35	DB93-14724A	ASSY CONNECTOR WIRE-DC	BLDC MOTOR WIRE	1
36	DB93-14209B	ASSY CONNECTOR WIRE-DISPLAY	DISPLAY WIRE	1

5-3 Assy Control Out (9K/12K)



No	NAME	CODE	QTY	No	NAME	CODE	QTY
1	GREASE-SILICON	0205-000178	0.002	8-12	ASSY CONNECTOR WIRE-COMM	DB93-14285A	1
2	SCREW-TAPPING	6002-000527	1	8-13	ASSY-SCREW TAPPING	DB97-02418A	4
3	SCREW-TAPPING	6002-000536	3	8-14	ASSY-LABEL CAUTION	DB98-33292A	1
4	CASE CONTROL	DB61-05883A	1	8-15	ASSY-LABEL CAUTION	DB98-33293A	1
5	HEAT SINK	DB62-11646A	1	8-16	ASSY-LABEL CAUTION	DB98-34030A	1
6	CABLE TIE	DB65-10088D	3	9	ASSY COVER CONTROL-UP	DB90-07729A	1
7	LABEL BAR CODE	DB68-02809A	1	9-1	PLATE CONTROL-UP	DB61-05821A	1
8	ASSY CASE CONTROL OUT	DB90-06308L	1	9-2	COVER CONTROL-OUT	DB63-03506A	1
8-1	SCREW-TAPPING	6002-000527	4	10	ASSY-SCREW MACHINE	DB91-00933A	4
8-2	SCREW-TAPPING	6002-000555	2	11	ASSY PCB SUB	DB92-02836A	1
8-3	SCREW-SPECIAL	6009-001001	4	12	ASSY MODULE	DB92-02862A	1
8-4	HOLDER-WIRE CLAMP	DB61-00250A	2	13	ASSY PCB MAIN	DB92-02866A	1
8-5	SUPPORT-PCB	DB61-04398A	2	14	ASSY CONNECTOR WIRE	DB93-09493C	1
8-6	PLATE CONTROL	DB61-05897A	1	15	ASSY CONNECTOR WIRE	DB93-09497E	1
8-7	TERMINAL BLOCK	DB65-00274A	1	16	ASSY CONNECTOR WIRE-POWER	DB93-14275A	1
8-8	TERMINAL BLOCK	DB65-00298B	1	17	ASSY CONNECTOR WIRE-DC SIGNAL	DB93-14276A	1
8-9	LABEL CAUTION	DB68-03146A	1	18	ASSY CONNECTOR WIRE-DC SIGNAL	DB93-14277A	1
8-10	ASSY CONNECTOR WIRE	DB93-09495	1	19	ASSY CONNECTOR WIRE-DC SIGNAL	DB93-14278A	1
8-11	ASSY CONNECTOR WIRE-EARTH WIRE	DB93-12121A	1				

6. Electrical Parts List

6-1 INDOOR MAIN PCB (DB92-02873C)

Parts Code	Design Loc	Parts Description	Quantity
0201-002081	-	ADHESIVE-SIL	0.8
0202-001463	SOLDER WIRE	SOLDER-WIRE	1.8
0202-001608	SOLDER-WIRE FLUX	SOLDER-WIRE FLUX	0.2
0204-004665	FLUX	FLUX	2
0502-000245	Q701	TR-POWER	1
1405-001239	VA71	VARISTOR	1
2301-002032	XC71	C-FILM,LEAD-PPF	1
2301-002032	XC72	C-FILM,LEAD-PPF	1
3002-001139	BZ61	BUZZER-PIEZO	1
3711-000024	CN76	HEADER-BOARD TO CABLE	1
3711-000177	CN21	HEADER-BOARD TO CABLE	1
3711-000203	CN75	HEADER-BOARD TO CABLE	1
3711-000296	CN72	HEADER-BOARD TO CABLE	1
3711-000941	CN81	HEADER-BOARD TO CABLE	1
3711-000998	CN77	CONNECTOR-HEADER	1
3711-000999	CN61	HEADER-BOARD TO CABLE	1
3711-002001	CN31	HEADER-BOARD TO CABLE	1
3711-003404	CN71	HEADER-BOARD TO CABLE	1
3711-003845	CN91	HEADER-BOARD TO CABLE	1
3711-004122	CN32	HEADER-BOARD TO CABLE	1
3711-004236	CN43	HEADER-BOARD TO CABLE	1
3711-005096	CN63	HEADER-BOARD TO CABLE	1
3711-005097	CN62	HEADER-BOARD TO CABLE	1
3711-005504	CN51	HEADER-BOARD TO CABLE	1
DB27-00096A	FT71	COIL CHOKE	1
DB67-00942A	VA71-1	CAP	1
DB68-02809A	LABEL BAR CODE	LABEL BAR CODE	1
DB94-04840A	-	ASSY PCB AUTO	1
0501-000362	Q801	TR-SMALL SIGNAL	1
1404-001194	PTC2	THERMISTOR-PTC	1
3601-001765	F701	FUSE-ETC	1
DB94-04841A	-	ASSY PCB SMD	1
0202-001459	SOLDER CREAM	SOLDER-CREAM	1
0402-001741	D701	DIODE-RECTIFIER	1
0406-001204	CD81	DIODE-TVS	1
0406-001204	CD82	DIODE-TVS	1
0406-001204	CD83	DIODE-TVS	1
0501-000465	Q702	TR-SMALL SIGNAL	1
0504-001080	Q601	TR-DIGITAL	1
0504-001080	Q802	TR-DIGITAL	1
0506-000175	IC05	TR-ARRAY	1
0506-000175	IC06	TR-ARRAY	1
0604-001002	PC03	PHOTO-COUPLER	1
0604-001002	PC04	PHOTO-COUPLER	1
0604-001002	PC05	PHOTO-COUPLER	1
0801-000393	IC08	IC-CMOS LOGIC	1
1006-001325	IC07	IC-BUS TRANSCEIVER	1
1202-000104	IC11	IC-VOLTAGE COMP.	1
1203-006245	IC03	IC-VOL. DETECTOR	1
1203-007526	IC02	IC-POSI.FIXED REG.	1
2007-000029	R850	R-CHIP	1
2007-000029	R851	R-CHIP	1
2007-000070	R717	R-CHIP	1
2007-000076	R601	R-CHIP	1
2007-000076	R602	R-CHIP	1
2007-000076	R716	R-CHIP	1
2007-000078	R703	R-CHIP	1
2007-000078	R706	R-CHIP	1
2007-000078	R805	R-CHIP	1
2007-000078	R815	R-CHIP	1
2007-000084	R707	R-CHIP	1
2007-000087	R708	R-CHIP	1
2007-000090	R701	R-CHIP	1
2007-000090	R704	R-CHIP	1
2007-000090	R705	R-CHIP	1
2007-000090	R723	R-CHIP	1
2007-000090	R801	R-CHIP	1
2007-000090	R802	R-CHIP	1

2007-000090	R803	R-CHIP	1
2007-000090	R804	R-CHIP	1
2007-000090	R816	R-CHIP	1
2007-000116	R825	R-CHIP	1
2007-000130	R715	R-CHIP	1
2007-000138	R508	R-CHIP	1
2007-000138	R515	R-CHIP	1
2007-000138	R516	R-CHIP	1
2007-000138	R517	R-CHIP	1
2007-000138	R518	R-CHIP	1
2007-000138	R519	R-CHIP	1
2007-000138	R520	R-CHIP	1
2007-000138	R539	R-CHIP	1
2007-000138	R542	R-CHIP	1
2007-000138	R809	R-CHIP	1
2007-000140	R538	R-CHIP	1
2007-000140	R545	R-CHIP	1
2007-000140	R806	R-CHIP	1
2007-000140	R901	R-CHIP	1
2007-000143	R511	R-CHIP	1
2007-000143	R512	R-CHIP	1
2007-000143	R513	R-CHIP	1
2007-000148	R502	R-CHIP	1
2007-000148	R503	R-CHIP	1
2007-000148	R504	R-CHIP	1
2007-000148	R505	R-CHIP	1
2007-000148	R506	R-CHIP	1
2007-000148	R507	R-CHIP	1
2007-000148	R510	R-CHIP	1
2007-000148	R521	R-CHIP	1
2007-000148	R522	R-CHIP	1
2007-000148	R523	R-CHIP	1
2007-000148	R524	R-CHIP	1
2007-000148	R525	R-CHIP	1
2007-000148	R526	R-CHIP	1
2007-000148	R527	R-CHIP	1
2007-000148	R528	R-CHIP	1
2007-000148	R529	R-CHIP	1
2007-000148	R530	R-CHIP	1
2007-000148	R531	R-CHIP	1
2007-000148	R532	R-CHIP	1
2007-000148	R533	R-CHIP	1
2007-000148	R534	R-CHIP	1
2007-000148	R543	R-CHIP	1
2007-000148	R544	R-CHIP	1
2007-000148	R807	R-CHIP	1
2007-000148	R808	R-CHIP	1
2007-000148	R810	R-CHIP	1
2007-000148	R824	R-CHIP	1
2007-000148	R903	R-CHIP	1
2007-000148	R904	R-CHIP	1
2007-000157	R902	R-CHIP	1
2007-000162	R820	R-CHIP	1
2007-000162	R821	R-CHIP	1
2007-000171	R831	R-CHIP	1
2007-000171	R833	R-CHIP	1
2007-000171	R835	R-CHIP	1
2007-000171	R837	R-CHIP	1
2007-000171	R839	R-CHIP	1
2007-000171	R843	R-CHIP	1
2007-000303	R702	R-CHIP	1
2007-000385	R115	R-CHIP	1
2007-000455	R712	R-CHIP	1
2007-000475	R709	R-CHIP	1
2007-000583	R714	R-CHIP	1
2007-000924	R112	R-CHIP	1
2007-000924	R113	R-CHIP	1
2007-000924	R114	R-CHIP	1
2007-000939	R711	R-CHIP	1
2007-000979	R713	R-CHIP	1

INDOOR MAIN PCB (DB92-02873C)

2007-001313	R404	R-CHIP	1
2007-001313	R405	R-CHIP	1
2007-001313	R406	R-CHIP	1
2007-001313	R410	R-CHIP	1
2007-001313	R811	R-CHIP	1
2007-001433	R618	R-CHIP	1
2007-007313	R401	R-CHIP	1
2007-007313	R402	R-CHIP	1
2007-007313	R403	R-CHIP	1
2007-009922	R301	R-CHIP	1
2007-009922	R302	R-CHIP	1
2007-009922	R303	R-CHIP	1
2203-000257	C705	C-CER,CHIP	1
2203-000257	C801	C-CER,CHIP	1
2203-000438	C508	C-CER,CHIP	1
2203-000438	C516	C-CER,CHIP	1
2203-000438	C520	C-CER,CHIP	1
2203-000438	C901	C-CER,CHIP	1
2203-000440	C711	C-CER,CHIP	1
2203-000440	C715	C-CER,CHIP	1
2203-001071	C519	C-CER,CHIP	1
2203-005249	C401	C-CER,CHIP	1
2203-005249	C402	C-CER,CHIP	1
2203-005249	C403	C-CER,CHIP	1
2203-005249	C511	C-CER,CHIP	1
2203-005249	C513	C-CER,CHIP	1
2203-005249	C514	C-CER,CHIP	1
2203-005249	C517	C-CER,CHIP	1
2203-005249	C522	C-CER,CHIP	1
2203-005249	C529	C-CER,CHIP	1
2203-005249	C530	C-CER,CHIP	1
2203-005249	C531	C-CER,CHIP	1
2203-005249	C533	C-CER,CHIP	1
2203-005249	C702	C-CER,CHIP	1
2203-005249	C704	C-CER,CHIP	1
2203-005249	C710	C-CER,CHIP	1
2203-005249	C712	C-CER,CHIP	1
2203-005249	C713	C-CER,CHIP	1
2203-005249	C802	C-CER,CHIP	1
2203-005249	C803	C-CER,CHIP	1
2203-005249	C805	C-CER,CHIP	1
2203-005249	C806	C-CER,CHIP	1
2203-005249	C807	C-CER,CHIP	1
2203-005249	C809	C-CER,CHIP	1
2203-006496	C707	C-CER,CHIP	1
2203-006960	C708	C-CER,CHIP	1
2203-007486	C509	C-CER,CHIP	1
2203-007486	C512	C-CER,CHIP	1
2203-007486	C515	C-CER,CHIP	1
2203-007486	C518	C-CER,CHIP	1
2203-007486	C521	C-CER,CHIP	1
2203-007486	C523	C-CER,CHIP	1
2203-007486	C526	C-CER,CHIP	1
2203-007486	C528	C-CER,CHIP	1
2203-007486	C551	C-CER,CHIP	1
2203-007486	C552	C-CER,CHIP	1
2203-007486	C804	C-CER,CHIP	1
2203-007486	C808	C-CER,CHIP	1
2402-000120	C706	C-AL,SMD	1
2402-001145	C701	C-AL,SMD	1
2402-001145	C703	C-AL,SMD	1
2802-001211	X501	RESONATOR-CERAMIC	1
DB41-01221A	PCB MAIN	PCB MAIN	1
DB91-01550B	-	ASSY MICOM	1
0903-001864	-	IC-MICROCONTROLLER	1
DB98-31449A	ASSY-LABEL MICOM	ASSY-LABEL MICOM	1

INDOOR DISPLAY PBA(DB92-02877) - 7-SEG

Parts Code	Design Loc	Quantity	Parts Description	Spec.
3711-003848	CN01	1	HEADER-BOARD TO CABLE	BOX, 11P, 1R, 2mm, ANGLE, SN, WHT
3711-003942	CN03	1	HEADER-BOARD TO CABLE	BOX, 2P, 1R, 2mm, STRAIGHT, SN, WHT
3711-004379	CN02	1	HEADER-BOARD TO CABLE	BOX, 4P, 1R, 2mm, STRAIGHT, SN, WHT
3711-004379	CN05	1	HEADER-BOARD TO CABLE	BOX, 4P, 1R, 2mm, STRAIGHT, SN, WHT
3711-005096	CN04	1	HEADER-BOARD TO CABLE	BOX, 5P, 1R, 2MM, STRAIGHT, SN, BLK
DB07-00188A	IC02	1	LED DISPLAY	WHITE, TRAY, 390x360, 29.0x23.0x13.5, TRAY, 390x360, 29.0x23.0x13.5
DB94-04104A		1	ASSY PCB AUTO	BETTER, BEST, A3050, 64*36, DB92-02877A
0601-003285	LED1	1	LED	ROUND, BLUE, 3.1mm, 3.9x5.4mm
0601-003285	LED2	1	LED	ROUND, BLUE, 3.1mm, 3.9x5.4mm
DB94-04105A		1	ASSY PCB SMD	BETTER, BEST, A3050, 64*36, DB92-02877A
0403-000258	ZD01	1	DIODE-ZENER	BZX84C5V6, 5.2-6V, 225mW, SOT-23, TP
0504-001080	Q01	1	TR-DIGITAL	KRC246S, NPN, 200mW, 2.2K/10Kohm, SOT-23, TP
1003-002078	IC01	1	IC-LED DRIVER	STLED316S, SO24, 24P, 7.55x15.48mm, -, 320mA, TP, PLASTIC, 5V, -45+85, 1200 mW, 0.4, IC LED DRIVER
2007-000070	R05	1	R-CHIP	0ohm, 5%, 1/10W, TP, 1608
2007-000078	R03	1	R-CHIP	1Kohm, 5%, 1/10W, TP, 1608
2007-000084	R07	1	R-CHIP	4.7Kohm, 5%, 1/10W, TP, 1608
2007-000090	R02	1	R-CHIP	10Kohm, 5%, 1/10W, TP, 1608
2007-000090	R04	1	R-CHIP	10Kohm, 5%, 1/10W, TP, 1608
2007-000090	R06	1	R-CHIP	10Kohm, 5%, 1/10W, TP, 1608
2203-000027	C04	1	C-CER, CHIP	10nF, 10%, 50V, X7R, TP, 1608, -
2203-000440	C03	1	C-CER, CHIP	1nF, 10%, 50V, X7R, TP, 1608
2203-005249	C02	1	C-CER, CHIP	100nF, 10%, 50V, X7R, TP, 1608
2203-005249	C05	1	C-CER, CHIP	100nF, 10%, 50V, X7R, TP, 1608
2402-001368	C01	1	C-AL, SMD	47uF, 20%, 25V, TP, 6.3x4.9mm
DB41-01225A	PCB DISPLAY	1	PCB DISPLAY	FR-4, 2Layer, 64*36, BETTER, BEST, 1Oz, 165*192

6-4 OUTDOOR MAIN PBA(DB92-02866A) - 9K/12K

Parts Code	Design Loc	Description	Spec.	QTY
0401-001099	D020	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D021	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D030	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D152	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D153	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D454	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D500	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D501	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D502	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D503	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D504	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D505	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D507	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D508	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D904	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0401-001099	D905	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1
0402-001795	D903	DIODE-RECTIFIER	US1M,1000V,1A,SMA,TP	1
0403-001499	ZD401	DIODE-ZENER	MMSZ5252B,22.8/25.2V,500mW,SOD-123,TP	1
0403-001499	ZD420	DIODE-ZENER	MMSZ5252B,22.8/25.2V,500mW,SOD-123,TP	1
0404-001020	D491	DIODE-SCHOTTKY	BAT54C,30V,200mA,SOT-23,TP	1
0404-001020	D492	DIODE-SCHOTTKY	BAT54C,30V,200mA,SOT-23,TP	1
0406-001204	TD301	DIODE-TVS	SMB□5.0CA,6.4/-/7.25V,600W,SMB	1
0406-001204	TD302	DIODE-TVS	SMB□5.0CA,6.4/-/7.25V,600W,SMB	1
0406-001204	TD303	DIODE-TVS	SMB□5.0CA,6.4/-/7.25V,600W,SMB	1
0501-000465	Q551	TR-SMALL SIGNAL	MMBT3904,NPN,350mW,SOT-23,TP,30-300	1
0504-001008	Q351	TR-DIGITAL	RN2427,PNP,200mW,2.2K/10Kohm,SOT-23,TP	1
0504-001008	Q352	TR-DIGITAL	RN2427,PNP,200mW,2.2K/10Kohm,SOT-23,TP	1
0504-001008	Q901	TR-DIGITAL	RN2427,PNP,200mW,2.2K/10Kohm,SOT-23,TP	1
0504-001008	Q903	TR-DIGITAL	RN2427,PNP,200mW,2.2K/10Kohm,SOT-23,TP	1
0504-001044	Q151	TR-DIGITAL	KRA226M,PNP,400MW,2.2K/10K,TO-92M,TP	1
0504-001080	Q902	TR-DIGITAL	KRC246S,NPN,200mW,2.2K/10Kohm,SOT-23,TP	1
0506-000175	IC061	TR-ARRAY	2003,NPN,7,1W,SOP-16,ST,1000	1
0506-000175	IC701	TR-ARRAY	2003,NPN,7,1W,SOP-16,ST,1000	1
0506-000175	IC702	TR-ARRAY	2003,NPN,7,1W,SOP-16,ST,1000	1
0601-002423	LED801	LED	SMD(REVERSE),RED,3.2x1.6mm,639nm,3.2x1.6x1.1mm	1
0601-002955	LED803	LED	SMD(REVERSE),YEL,1.6x1.5mm,588nm,3.2x1.6x1.1mm	1
0601-002956	LED551	LED	SMD(REVERSE),GRN,1.6x1.5mm,3.2x1.6x1.1mm	1
0601-002956	LED802	LED	SMD(REVERSE),GRN,1.6x1.5mm,3.2x1.6x1.1mm	1
0604-001172	PC151	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1
0604-001172	PC351	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1
0604-001172	PC352	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1
0801-000393	IC302	IC-CMOS LOGIC	74HC86,OR GATE,SOP,14P,150MIL,QUAD,ST,-,2.0/6.0V,0.26V,-40to+85C,180mW,4.2V,1uA,	1
1006-001325	IC301	IC-BUS TRANSCEIVER	ISL81487LIBZ,SO,8P,4.9x3.8 mm,SINGLE,ST,PLASTIC,5V,-40to+85C,520mW,1,1,1.5/5.0V	1
1201-002946	IC451	IC-OP AMP	TSSOP,TR,14P,5x4.4x1.2mm,100,5.5V,-40to+85C,63dB,1,1nA,1nA,1.7mV	1
1203-002835	IC154	IC-POSI.FIXED REG.	7805,3P,6.6x6.1mm,PLASTIC,4.8V/5.2V,1.3W,-40to+85,1A,TP	1
1203-002986	IC155	IC-POSI.FIXED REG.	7812,3P,6.6x6.1mm,PLASTIC,11.5/12.5V,1.3,150C,1A,TP	1
1203-004967	IC502	IC-VOL. DETECTOR	KIA7042AT,TSM,3P,2.9x1.6mm,PLASTIC,4.2V,350mW,-30to+75C,20mA,-,-	1
1404-001498	PTC020	THERMISTOR-PTC	40ohm,25□ ,290Vac,7A,TR	1
1405-000154	VA002	VARISTOR	560V,460Vdc,4500A,17.5x7.5mm,BK,920V,600pF	1
1405-000154	VA003	VARISTOR	560V,460Vdc,4500A,17.5x7.5mm,BK,920V,600pF	1
1405-001239	VA001	VARISTOR	680V,560Vdc,6000A,17x7.3mm,BK,1120V,350pF	1
1405-001239	VA401	VARISTOR	680V,560Vdc,6000A,17x7.3mm,BK,1120V,350pF	1
2007-000043	R424	R-CHIP	1Kohm,1□ ,1/10W,TP,1608	1
2007-000070	R309	R-CHIP	0ohm,5□ ,1/10W,TP,1608	1
2007-000074	R152	R-CHIP	100ohm,5□ ,1/10W,TP,1608	1
2007-000074	R210	R-CHIP	100ohm,5□ ,1/10W,TP,1608	1
2007-000074	R213	R-CHIP	100ohm,5□ ,1/10W,TP,1608	1
2007-000074	R233	R-CHIP	100ohm,5□ ,1/10W,TP,1608	1
2007-000074	R234	R-CHIP	100ohm,5□ ,1/10W,TP,1608	1
2007-000074	R401	R-CHIP	100ohm,5□ ,1/10W,TP,1608	1

OUTDOOR MAIN PBA(DB92-02866A) - 9K/12K (cont.)

Parts Code	Design Loc	Description	Spec.	QTY
2007-000074	R402	R-CHIP	100ohm,5% ,1/10W,TP,1608	1
2007-000074	R403	R-CHIP	100ohm,5% ,1/10W,TP,1608	1
2007-000074	R404	R-CHIP	100ohm,5% ,1/10W,TP,1608	1
2007-000074	R405	R-CHIP	100ohm,5% ,1/10W,TP,1608	1
2007-000074	R406	R-CHIP	100ohm,5% ,1/10W,TP,1608	1
2007-000074	R407	R-CHIP	100ohm,5% ,1/10W,TP,1608	1
2007-000074	R420	R-CHIP	100ohm,5% ,1/10W,TP,1608	1
2007-000074	R422	R-CHIP	100ohm,5% ,1/10W,TP,1608	1
2007-000074	R516	R-CHIP	100ohm,5% ,1/10W,TP,1608	1
2007-000074	R519	R-CHIP	100ohm,5% ,1/10W,TP,1608	1
2007-000074	R562	R-CHIP	100ohm,5% ,1/10W,TP,1608	1
2007-000076	R153	R-CHIP	330ohm,5% ,1/10W,TP,1608	1
2007-000076	R255	R-CHIP	330ohm,5% ,1/10W,TP,1608	1
2007-000076	R256	R-CHIP	330ohm,5% ,1/10W,TP,1608	1
2007-000076	R257	R-CHIP	330ohm,5% ,1/10W,TP,1608	1
2007-000076	R258	R-CHIP	330ohm,5% ,1/10W,TP,1608	1
2007-000076	R352	R-CHIP	330ohm,5% ,1/10W,TP,1608	1
2007-000076	R353	R-CHIP	330ohm,5% ,1/10W,TP,1608	1
2007-000076	R512	R-CHIP	330ohm,5% ,1/10W,TP,1608	1
2007-000076	R567	R-CHIP	330ohm,5% ,1/10W,TP,1608	1
2007-000076	R904	R-CHIP	330ohm,5% ,1/10W,TP,1608	1
2007-000078	R303	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R307	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R308	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R351	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R354	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R503	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R504	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R505	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R508	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R509	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R515	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R529	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R530	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R556	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R557	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R558	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R560	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000078	R563	R-CHIP	1Kohm,5% ,1/10W,TP,1608	1
2007-000080	R522	R-CHIP	2Kohm,5% ,1/10W,TP,1608	1
2007-000082	R421	R-CHIP	3.3Kohm,5% ,1/10W,TP,1608	1
2007-000084	R211	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R212	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R214	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R215	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R216	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R217	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R218	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R219	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R220	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R408	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R501	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R506	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R507	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R510	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R511	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R517	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R518	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R520	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R521	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R523	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R524	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R525	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R526	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1

OUTDOOR MAIN PBA(DB92-02866A) - 9K/12K (cont.)

Parts Code	Design Loc	Description	Spec.	QTY
2007-000084	R527	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R534	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R535	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R536	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000084	R903	R-CHIP	4.7Kohm,5% ,1/10W,TP,1608	1
2007-000090	R301	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R302	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R304	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R305	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R528	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R532	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R533	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R551	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R552	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R553	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R554	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R555	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R559	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000090	R565	R-CHIP	10Kohm,5% ,1/10W,TP,1608	1
2007-000109	R531	R-CHIP	1Mohm,5% ,1/10W,TP,1608	1
2007-000116	R306	R-CHIP	120ohm,5% ,1/10W,TP,1608	1
2007-000124	R564	R-CHIP	2.2Kohm,5% ,1/10W,TP,1608	1
2007-000140	R202	R-CHIP	1Kohm,5% ,1/16W,TP,1005	1
2007-000140	R205	R-CHIP	1Kohm,5% ,1/16W,TP,1005	1
2007-000143	R207	R-CHIP	4.7Kohm,5% ,1/16W,TP,1005	1
2007-000143	R221	R-CHIP	4.7Kohm,5% ,1/16W,TP,1005	1
2007-000143	R222	R-CHIP	4.7Kohm,5% ,1/16W,TP,1005	1
2007-000143	R223	R-CHIP	4.7Kohm,5% ,1/16W,TP,1005	1
2007-000143	R224	R-CHIP	4.7Kohm,5% ,1/16W,TP,1005	1
2007-000143	R225	R-CHIP	4.7Kohm,5% ,1/16W,TP,1005	1
2007-000143	R226	R-CHIP	4.7Kohm,5% ,1/16W,TP,1005	1
2007-000143	R227	R-CHIP	4.7Kohm,5% ,1/16W,TP,1005	1
2007-000143	R228	R-CHIP	4.7Kohm,5% ,1/16W,TP,1005	1
2007-000143	R229	R-CHIP	4.7Kohm,5% ,1/16W,TP,1005	1
2007-000143	R230	R-CHIP	4.7Kohm,5% ,1/16W,TP,1005	1
2007-000143	R231	R-CHIP	4.7Kohm,5% ,1/16W,TP,1005	1
2007-000143	R232	R-CHIP	4.7Kohm,5% ,1/16W,TP,1005	1
2007-000148	R203	R-CHIP	10Kohm,5% ,1/16W,TP,1005	1
2007-000148	R204	R-CHIP	10Kohm,5% ,1/16W,TP,1005	1
2007-000148	R206	R-CHIP	10Kohm,5% ,1/16W,TP,1005	1
2007-000170	R201	R-CHIP	1Mohm,5% ,1/16W,TP,1005	1
2007-000239	R491	R-CHIP	1.5Kohm,1% ,1/10W,TP,1608	1
2007-000256	R455	R-CHIP	1.6Kohm,1% ,1/10W,TP,1608	1
2007-000256	R457	R-CHIP	1.6Kohm,1% ,1/10W,TP,1608	1
2007-000256	R468	R-CHIP	1.6Kohm,1% ,1/10W,TP,1608	1
2007-000300	R901	R-CHIP	10Kohm,5% ,1/8W,TP,2012	1
2007-000385	R101	R-CHIP	14.3Kohm,1% ,1/4W,TP,3216	1
2007-000385	R105	R-CHIP	14.3Kohm,1% ,1/4W,TP,3216	1
2007-000455	R251	R-CHIP	18Kohm,1% ,1/10W,TP,1608	1
2007-000455	R253	R-CHIP	18Kohm,1% ,1/10W,TP,1608	1
2007-000491	R561	R-CHIP	2.2Kohm,1% ,1/10W,TP,1608	1
2007-000536	R492	R-CHIP	200ohm,1% ,1/10W,TP,1608	1
2007-000537	R154	R-CHIP	200ohm,1% ,1/4W,TP,3216	1
2007-000537	R155	R-CHIP	200ohm,1% ,1/4W,TP,3216	1
2007-000537	R156	R-CHIP	200ohm,1% ,1/4W,TP,3216	1
2007-000537	R157	R-CHIP	200ohm,1% ,1/4W,TP,3216	1
2007-000537	R158	R-CHIP	200ohm,1% ,1/4W,TP,3216	1
2007-000614	R252	R-CHIP	24Kohm,1% ,1/10W,TP,1608	1
2007-000614	R254	R-CHIP	24Kohm,1% ,1/10W,TP,1608	1
2007-000614	R469	R-CHIP	24Kohm,1% ,1/10W,TP,1608	1
2007-000614	R470	R-CHIP	24Kohm,1% ,1/10W,TP,1608	1
2007-000614	R471	R-CHIP	24Kohm,1% ,1/10W,TP,1608	1
2007-000614	R472	R-CHIP	24Kohm,1% ,1/10W,TP,1608	1
2007-000614	R473	R-CHIP	24Kohm,1% ,1/10W,TP,1608	1

OUTDOOR MAIN PBA(DB92-02866A) - 9K/12K (cont.)

Parts Code	Design Loc	Description	Spec.	QTY
2007-000614	R474	R-CHIP	24Kohm,1% ,1/10W,TP,1608	1
2007-000651	R475	R-CHIP	27Kohm,1% ,1/10W,TP,1608	1
2007-000683	R454	R-CHIP	3.3Kohm,1% ,1/10W,TP,1608	1
2007-000683	R459	R-CHIP	3.3Kohm,1% ,1/10W,TP,1608	1
2007-000683	R466	R-CHIP	3.3Kohm,1% ,1/10W,TP,1608	1
2007-000763	R476	R-CHIP	330ohm,1% ,1/10W,TP,1608	1
2007-000763	R477	R-CHIP	330ohm,1% ,1/10W,TP,1608	1
2007-000872	R801	R-CHIP	4.7Kohm,5% ,1/8W,TP,2012	1
2007-000872	R802	R-CHIP	4.7Kohm,5% ,1/8W,TP,2012	1
2007-000872	R803	R-CHIP	4.7Kohm,5% ,1/8W,TP,2012	1
2007-000924	R102	R-CHIP	470Kohm,1% ,1/4W,TP,3216	1
2007-000924	R103	R-CHIP	470Kohm,1% ,1/4W,TP,3216	1
2007-000924	R104	R-CHIP	470Kohm,1% ,1/4W,TP,3216	1
2007-000924	R106	R-CHIP	470Kohm,1% ,1/4W,TP,3216	1
2007-000924	R107	R-CHIP	470Kohm,1% ,1/4W,TP,3216	1
2007-000924	R108	R-CHIP	470Kohm,1% ,1/4W,TP,3216	1
2007-000979	R478	R-CHIP	5.6Kohm,1% ,1/10W,TP,1608	1
2007-001071	R902	R-CHIP	6.8Kohm,5% ,1/8W,TP,2012	1
2007-001175	R409	R-CHIP	8.2Kohm,1% ,1/10W,TP,1608	1
2007-001175	R423	R-CHIP	8.2Kohm,1% ,1/10W,TP,1608	1
2007-001175	R427	R-CHIP	8.2Kohm,1% ,1/10W,TP,1608	1
2007-010245	R410	R-CHIP	0.01ohm,1% ,2W,TP,6432	1
2007-010245	R411	R-CHIP	0.01ohm,1% ,2W,TP,6432	1
2007-010245	R412	R-CHIP	0.01ohm,1% ,2W,TP,6432	1
2007-010245	R425	R-CHIP	0.01ohm,1% ,2W,TP,6432	1
2007-010245	R426	R-CHIP	0.01ohm,1% ,2W,TP,6432	1
2201-000540	C425	C-CERAMIC,DISC	4.7nF,20% ,2000V,Y5U,12x5mm,10mm	1
2201-002002	C004	C-CERAMIC,DISC	4.7nF,20% ,400V,Y5U,16x6mm,10mm	1
2201-002002	C005	C-CERAMIC,DISC	4.7nF,20% ,400V,Y5U,16x6mm,10mm	1
2201-002002	C012	C-CERAMIC,DISC	4.7nF,20% ,400V,Y5U,16x6mm,10mm	1
2201-002002	C013	C-CERAMIC,DISC	4.7nF,20% ,400V,Y5U,16x6mm,10mm	1
2201-002427	C901	C-CERAMIC,DISC	2.2nF,K(10%),2000V,Y5P,12.5x5mm,7.5mm	1
2203-000236	C421	C-CER,CHIP	0.1nF,5% ,50V,C0G,TP,1608	1
2203-000257	C222	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C223	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C224	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C225	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C301	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C351	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C352	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C422	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000257	C423	C-CER,CHIP	10nF,10% ,50V,X7R,TP,1608	1
2203-000440	C404	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C405	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C406	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C408	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C409	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C410	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C411	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C501	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C504	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C505	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C506	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C507	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C508	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C510	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C512	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C523	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000440	C904	C-CER,CHIP	1nF,10% ,50V,X7R,TP,1608	1
2203-000783	C455	C-CER,CHIP	0.33nF,5% ,50V,C0G,TP,1608	1
2203-000783	C458	C-CER,CHIP	0.33nF,5% ,50V,C0G,TP,1608	1
2203-002002	C453	C-CER,CHIP	0.033nF,5% ,50V,NP0,TP,1608	1
2203-002002	C454	C-CER,CHIP	0.033nF,5% ,50V,NP0,TP,1608	1
2203-002002	C459	C-CER,CHIP	0.033nF,5% ,50V,NP0,TP,1608	1

OUTDOOR MAIN PBA(DB92-02866A) - 9K/12K (cont.)

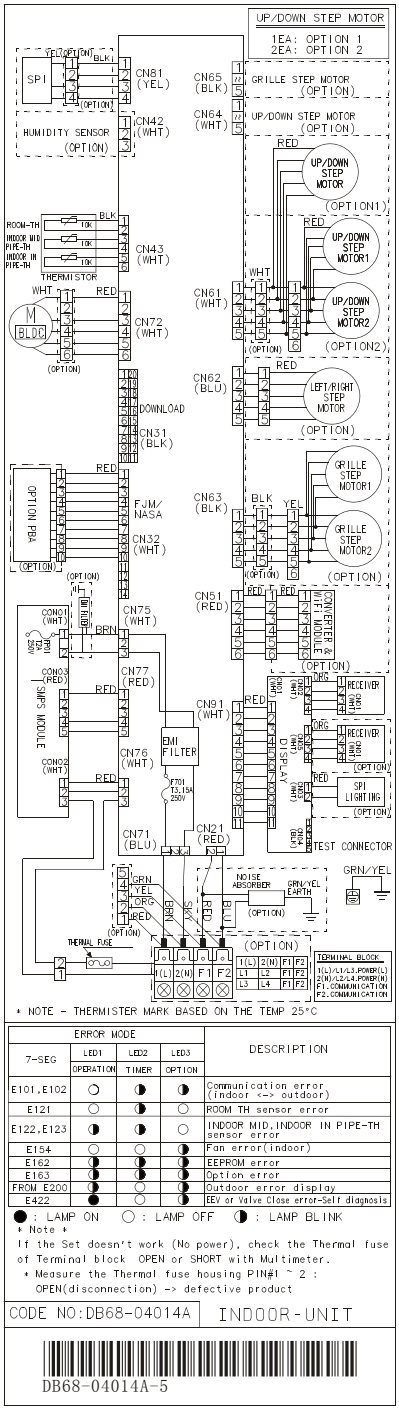
Parts Code	Design Loc	Description	Spec.	QTY
2203-002002	C515	C-CER,CHIP	0.033nF,5% ,50V,NP0,TP,1608	1
2203-002002	C516	C-CER,CHIP	0.033nF,5% ,50V,NP0,TP,1608	1
2203-002002	C517	C-CER,CHIP	0.033nF,5% ,50V,NP0,TP,1608	1
2203-002002	C518	C-CER,CHIP	0.033nF,5% ,50V,NP0,TP,1608	1
2203-002002	C519	C-CER,CHIP	0.033nF,5% ,50V,NP0,TP,1608	1
2203-002398	C524	C-CER,CHIP	22nF,10% ,50V,X7R,TP,1608	1
2203-005249	C061	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C151	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C152	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C153	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C154	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C162	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C163	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C220	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C221	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C251	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C252	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C253	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C254	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C302	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C303	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C304	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C305	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C306	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C307	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C401	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C402	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C403	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C407	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C420	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C424	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C460	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C503	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C509	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C511	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C514	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C520	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C521	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C525	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C526	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C527	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C701	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C702	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C703	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C704	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-005249	C903	C-CER,CHIP	100nF,10% ,50V,X7R,TP,1608	1
2203-006158	C201	C-CER,CHIP	100nF,10% ,16V,X7R,TP,1005,0.5T	1
2203-006158	C203	C-CER,CHIP	100nF,10% ,16V,X7R,TP,1005,0.5T	1
2203-006158	C204	C-CER,CHIP	100nF,10% ,16V,X7R,TP,1005,0.5T	1
2203-006158	C206	C-CER,CHIP	100nF,10% ,16V,X7R,TP,1005,0.5T	1
2203-006158	C207	C-CER,CHIP	100nF,10% ,16V,X7R,TP,1005,0.5T	1
2203-006158	C208	C-CER,CHIP	100nF,10% ,16V,X7R,TP,1005,0.5T	1
2203-006158	C210	C-CER,CHIP	100nF,10% ,16V,X7R,TP,1005,0.5T	1
2203-006158	C211	C-CER,CHIP	100nF,10% ,16V,X7R,TP,1005,0.5T	1
2203-006158	C212	C-CER,CHIP	100nF,10% ,16V,X7R,TP,1005,0.5T	1
2203-006460	C522	C-CER,CHIP	2200nF,10% ,16V,X5R,TP,1608,-	1
2203-006960	C902	C-CER,CHIP	1000nF,10% ,50V,X7R,TP,2012	1
2203-007456	C202	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1005,0.5T	1
2203-007456	C205	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1005,0.5T	1
2203-007456	C209	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1005,0.5T	1
2203-007456	C213	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1005,0.5T	1
2203-007456	C214	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1005,0.5T	1
2203-007456	C226	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1005,0.5T	1

OUTDOOR MAIN PBA(DB92-02866A) - 9K/12K (cont.)

Parts Code	Design Loc	Description	Spec.	QTY
2203-007456	C227	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1005,0.5T	1
2203-007456	C228	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1005,0.5T	1
2203-007456	C229	C-CER,CHIP	1000nF,10% ,25V,X5R,TP,1005,0.5T	1
2301-001285	C001	C-FILM,LEAD-PPF	680nF,10% ,275V,BK,31x11x21mm	1
2301-001285	C006	C-FILM,LEAD-PPF	680nF,10% ,275V,BK,31x11x21mm	1
2306-000123	C412	C-FILM,LEAD-PPF	100nF,5% ,630V,BK,26x16.5x8.5mm	1
2401-000303	CE162	C-AL	100uF,20% ,25V,WT,TP,6.3x11mm,5mm	1
2401-000303	CE163	C-AL	100uF,20% ,25V,WT,TP,6.3x11mm,5mm	1
2401-001838	CE151	C-AL	470uF,20% ,25V,WT,TP,10x16,5mm	1
2401-002438	CE902	C-AL	47uF,20% ,50V,WT,TP,6.3x11,5mm	1
2401-003224	CE152	C-AL	470uF,20% ,16V,WT,TP,8X11.5,5mm	1
2401-003585	CE901	C-AL	220uF,20% ,35V,WT,TP,8x11.5mm,5	1
2401-004874	CE101	C-AL	330uF,20% ,400V,BK,25.4X50,10mm	1
2401-004874	CE102	C-AL	330uF,20% ,400V,BK,25.4X50,10mm	1
2401-004874	CE103	C-AL	330uF,20% ,400V,BK,25.4X50,10mm	1
2402-001183	CE451	C-AL,SMD	22UF,20% ,16V,WT,TP,5.3X5.3X6MM	1
2402-001268	CE153	C-AL,SMD	100uF,20% ,25V,WT,TP,8x6.3mm	1
2402-001268	CE404	C-AL,SMD	100uF,20% ,25V,WT,TP,8x6.3mm	1
2402-001268	CE420	C-AL,SMD	100uF,20% ,25V,WT,TP,8x6.3mm	1
2402-001368	CE401	C-AL,SMD	47uF,20% ,25V,TP,6.3x4.9mm	1
2402-001368	CE402	C-AL,SMD	47uF,20% ,25V,TP,6.3x4.9mm	1
2402-001368	CE403	C-AL,SMD	47uF,20% ,25V,TP,6.3x4.9mm	1
2802-001165	X201	RESONATOR-CERAMIC	4MHz,0.5% ,TP,4.5x2.0x1.15mm	1
2802-001211	X501	RESONATOR-CERAMIC	8MHZ,0.1% ,TP,3.2X1.3X0.9 MM	1
3501-001154	RY022	RELAY-MINIATURE	12V,200mW,3000mA,1FormA,10ms,10ms	1
3501-001154	RY030	RELAY-MINIATURE	12V,200mW,3000mA,1FormA,10ms,10ms	1
3501-001279	RY021	RELAY-POWER	12V DC,400mW,16000mA,1Form A,15mS,5mS	1
3601-001538	F001	FUSE-AXIAL LEAD	250V,15A,TIME-LAG,CERAMIC,6.35x31.8mm	1
3711-000015	CN203	HEADER-BOARD TO CABLE	BOX,2P,1R,2.5MM,STRAIGHT,SN,WHT	1
3711-000024	CN202	HEADER-BOARD TO CABLE	BOX,3P,1R,2.5MM,STRAIGHT,SN,WHT	1
3711-000177	CN301	HEADER-BOARD TO CABLE	1WALL,2P,1R,3.96MM,STRAIGHT,SN,RED	1
3711-000203	CN030	HEADER-BOARD TO CABLE	1WALL,2P/3P,1R,7.92mm,STRAIGHT,SN,WHT	1
3711-000296	CN901	HEADER-BOARD TO CABLE	1WALL,6P,1R,3.96MM,STRAIGHT,SN,WHT	1
3711-000760	CN551	HEADER-BOARD TO CABLE	BOX,20P,2R,2MM,ANGLE,SN,BLK	1
3711-000879	CN152	HEADER-BOARD TO CABLE	BOX,3P,1R,2.5mm,STRAIGHT,SN,BLU	1
3711-000880	CN151	HEADER-BOARD TO CABLE	BOX,3P,1R,2.5MM,STRAIGHT,SN,RED	1
3711-000998	CN701	CONNECTOR-HEADER	BOX,5P,1R,2.5MM,STRAIGHT,SN,RED	1
3711-000999	CN204	HEADER-BOARD TO CABLE	BOX,5P,1R,2.5mm,STRAIGHT,SN,WHT	1
3711-002001	CN201	HEADER-BOARD TO CABLE	BOX,20P,2R,2MM,STRAIGHT,SN,BLK	1
3711-003404	CN150	HEADER-BOARD TO CABLE	1WALL,2P,1R,7.92mm,STRAIGHT,SN,BLU	1
3711-003843	CN251	HEADER-BOARD TO CABLE	BOX,8P,1R,2mm,STRAIGHT,SN,WHT	1
3711-007656	CN402	HEADER-BOARD TO CABLE	BOX,3,1R,6mm,STRAIGHT,WHT	1
3711-007659	CN401	HEADER-BOARD TO CABLE	BOX,2,1R,7.92mm,STRAIGHT,WHT	1
3711-007817	CN501	HEADER-BOARD TO BOARD	3WALL,7P,1R,2mm,STRAIGHT,SN,WHT	1
3712-001047	CN003	CONNECTOR-Terminal	TAB,MALE,N,0.5/4.75mm	1
3712-001139	CN001	CONNECTOR-Terminal	TAB,MALE,6.35x0.8mm	1
3712-001139	CN002	CONNECTOR-Terminal	TAB,MALE,6.35x0.8mm	1
4715-001093	DSA001	SURGE ABSORBER	3600V,20% ,2000A,-,AXIAL	1
4719-002483	PFC050	POWER MODULE	Smart Power Module,FPAB20BH60B,600V,20A,89W,20kHz,PFCM	1
4719-002484	IPM400	POWER MODULE	Smart Power Module,FNA41560B2,600V,15A,41W,20kHz	1
DB27-00097A	FT001	COIL CHOKE	CC-35-15SS,SI,3.5mH,+50%-30% ,15mohm Max,15A,-25%+115	1
DB41-01227A	PCB MAIN	PCB MAIN	FR-4,2Layer,142%197,PF#2,OUTDOOR,2Oz,142%197	1
DB61-05296A	SUPPORT-IC	SUPPORT-IC	AFX-HD233A,PA66,FR50,BLACK	1
DB61-05916A	SUPPORT-PCB	SUPPORT-PCB	XS01_V2MD,HIPS,S834S1,15.5g,BLACK	1
DB91-01517A	IC501	ASSY MICOM	Soc 1Phase PF2,PF3,PF4,PF6,STM-125F-OA, HART-I910, 64LQFP, ROM 64KB	1
0903-001843	-	IC-MICROCONTROLLER	HART-I910,LQFP,64Z30,12x12mm,8MHz,5V,600mW,-40to+85C,12KB,64KB,Inverter SOC,Inverter SOC	1
DB91-01534A	IC201	ASSY MICOM	RAC A3050 Outdoor Micom,STM-130C-OS, S3FM02G, 128TQFP, ROM 384KB	1
DB09-00596A	-	IC MICOM	S3FM02G,128P,DC3V,TQFP,-40%+85,384K	1

7. Wiring Diagram

7-1 Indoor Unit



ERROR MODE				DESCRIPTION
7-SEG	LED1 OPERATION	LED2 TIMER	LED3 OPTION	
E101,E102	○	◑	◑	Communication error (Indoor <-> outdoor)
E121	○	◑	○	ROOM TH sensor error
E122,E123	◑	◑	○	INDOOR MID,INDOOR IN PIPE-TH sensor error
E154	○	○	◑	Fan error(indoor)
E162	◑	◑	◑	EEPROM error
E163	◑	◑	◑	Option error
FROM E200	◑	○	◑	Outdoor error display
E422	●	○	◑	EEV or Valve Close error-Self diagnosis

● : LAMP ON ○ : LAMP OFF ◑ : LAMP BLINK

* Note *

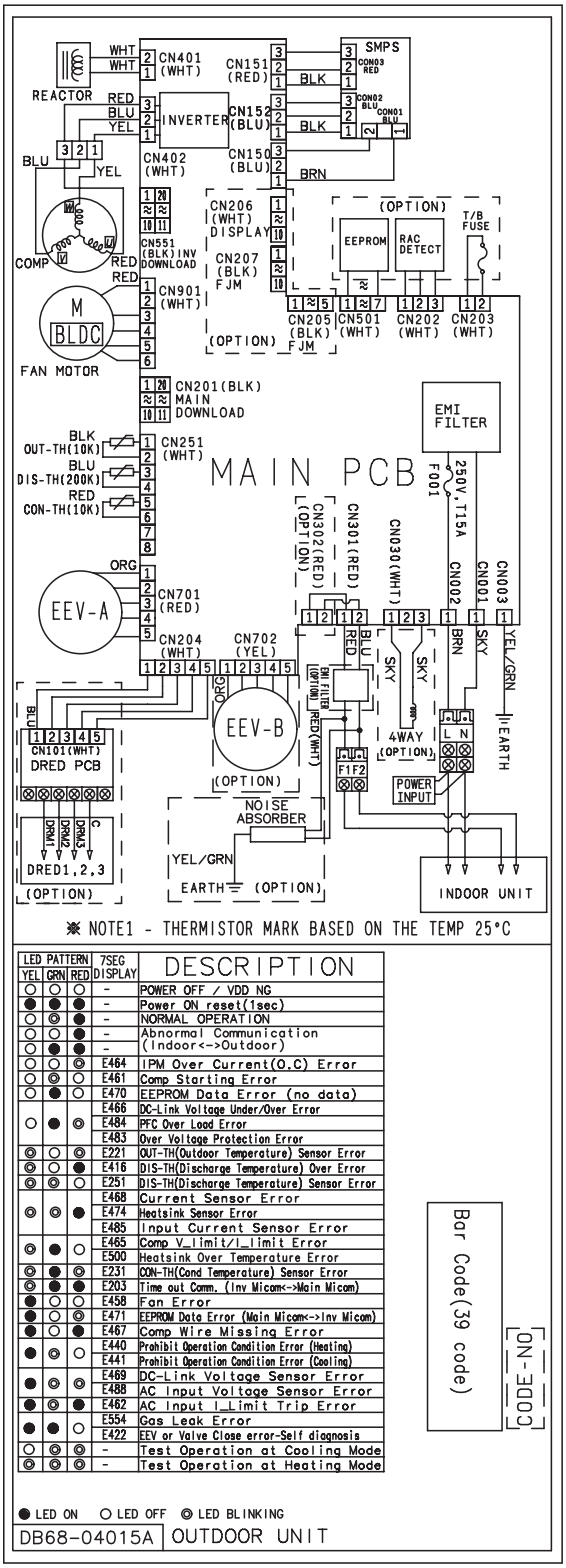
If the Set doesn't work (No power), check the Thermal fuse of Terminal block OPEN or SHORT with Multimeter.

* Measure the Thermal fuse housing PIN#1 ~ 2 :
OPEN(disconnection) -> defective product

CODE NO:DB68-04014A INDOOR-UNIT

DB68-04014A-5

7-2 Outdoor Unit



LED PATTERN YEL	LED PATTERN GRN	LED PATTERN RED	7SEG DISPLAY	DESCRIPTION
○	○	○	-	POWER OFF / VDD NG
●	●	●	-	Power ON reset(1sec)
○	◎	●	-	NORMAL OPERATION
○	○	●	-	Abnormal Communication (Indoor<->Outdoor)
○	●	●	-	
○	○	◎	E464	IPM Over Current(O.C) Error
○	◎	○	E461	Comp Starting Error
○	●	○	E470	EEPROM Data Error (no data)
○	●	◎	E466	DC-Link Voltage Under/Over Error
			E484	PFC Over Load Error
			E483	Over Voltage Protection Error
◎	○	◎	E221	OUT-TH(Outdoor Temperature) Sensor Error
◎	○	●	E416	DIS-TH(Discharge Temperature) Over Error
◎	◎	○	E251	DIS-TH(Discharge Temperature) Sensor Error
◎	◎	●	E468	Current Sensor Error
			E474	Heatsink Sensor Error
			E485	Input Current Sensor Error
◎	●	○	E465	Comp V_limit/I_limit Error
			E500	Heatsink Over Temperature Error
◎	●	◎	E231	CON-TH(Cond Temperature) Sensor Error
◎	●	●	E203	Time out Comm. (Inv Micom<->Main Micom)
●	○	○	E458	Fan Error
●	○	◎	E471	EEPROM Data Error (Main Micom<->Inv Micom)
●	○	●	E467	Comp Wire Missing Error
●	◎	○	E440	Prohibit Operation Condition Error (Heating)
			E441	Prohibit Operation Condition Error (Cooling)
●	◎	◎	E469	DC-Link Voltage Sensor Error
			E488	AC Input Voltage Sensor Error
●	◎	●	E462	AC Input I_Limit Trip Error
●	●	○	E554	Gas Leak Error
			E422	EEV or Valve Close error-Self diagnosis
○	◎	◎	-	Test Operation at Cooling Mode
◎	◎	◎	-	Test Operation at Heating Mode

Bar Code(39 code)

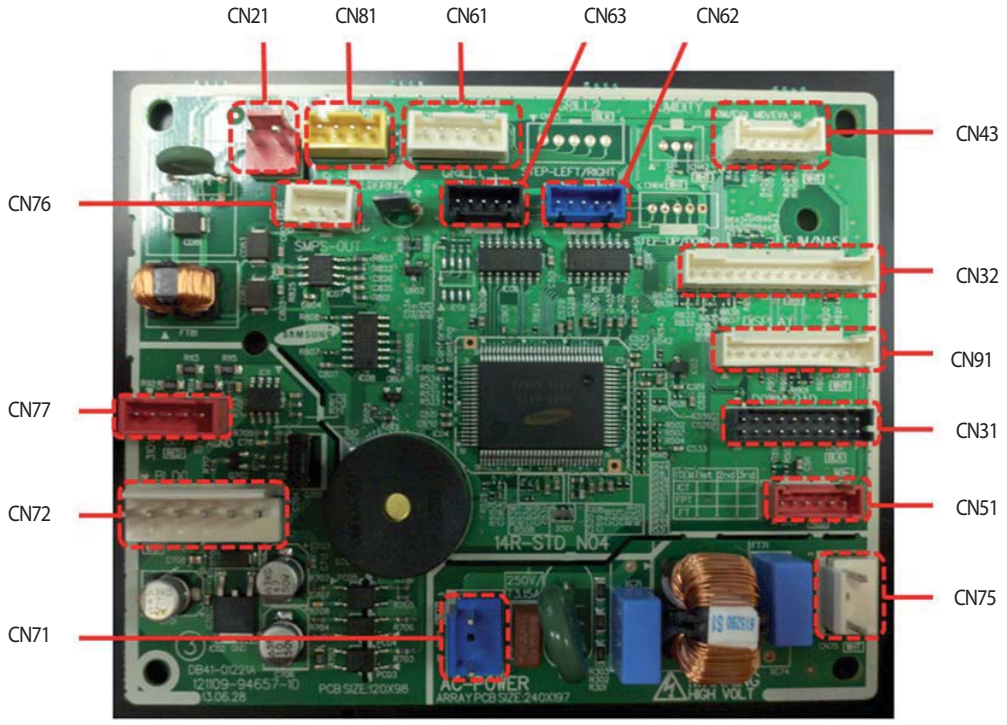
CODE-NO

● LED ON ○ LED OFF ◎ LED BLINKING

DB68-04015A | OUTDOOR UNIT

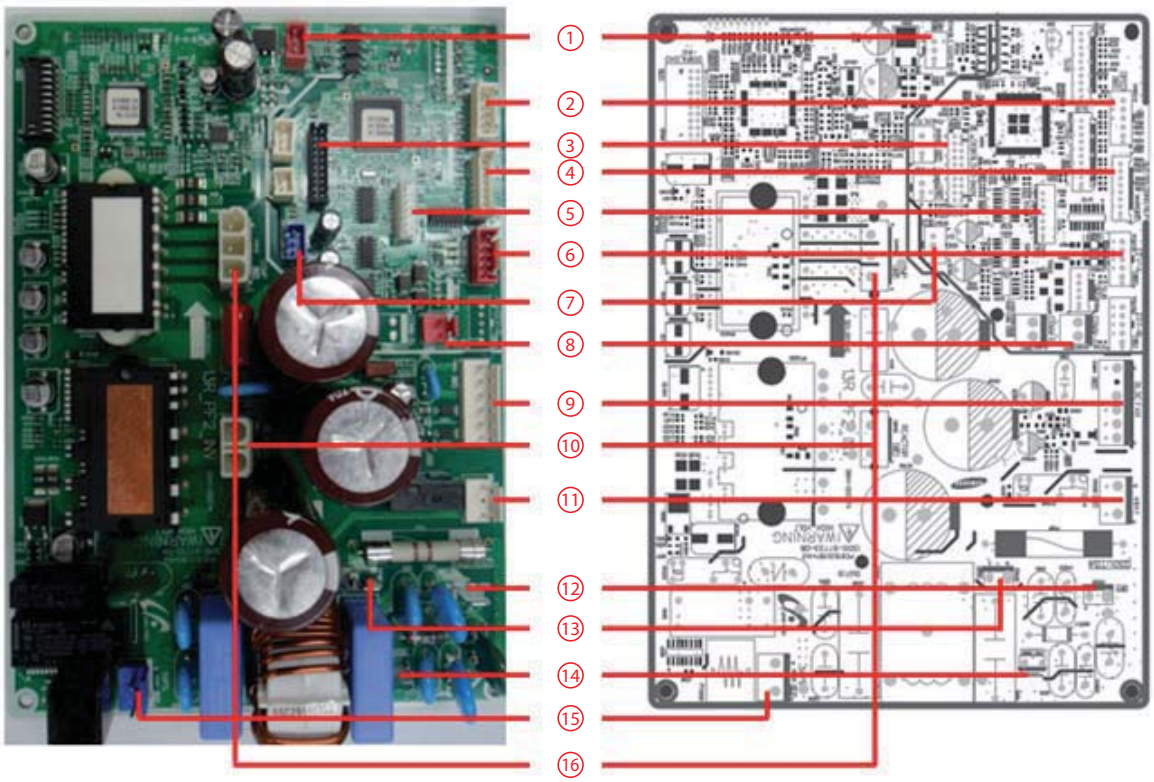
8. PCB Diagram

8-1 Indoor PCB



① **CN61/CN62/CN63 - STEP MOTOR** #1: DC 12V #2~#5 :STEP MOTOR SIGNAL	② **CN71 - POWER IN** #1,#3 : AC220~240V #2 : N.C	③ **CN81 - SPI** #1: SPI SIGNAL #3 : DC 12V	④ **CN51 - WI-FI MODULE** #1 : WIFI UART SIGNAL1 #2 : WIFI UART SIGNAL2 #3 : WIFI RESET SIGNAL #4 : GND #5 : DC 12V #6 : N.C
⑤ **CN51 - DISPLAY** #1~#11,#14,#17~#20 : MICOM DOWN #12, #13, #15, #16 : N.C	⑥ **CN43 - TEMPERATURE SENSOR** #1,#2 : ROOM SENSOR #3,#4 : EVA MID SENSOR #5,#6 : EVA IN SENSOR	⑦ **CN21 - COMMUNICATION** #1,#2 : 485 COMM SIGNAL	⑧ **CN72 - BLDC FAN MOTOR** #1 : DC 310~340V #2 : N.C #3 : AGND #4 : DC 15V #5 : FAN RPM #6 : FAN FEEDBACK
⑨ **CN32 - FJM/NASA** #1~#7, #11~ #14 : FJM/NASA SIGNAL #8 : DC 5V #9 : GND #10 : DC 12V	⑩ **CN75 - SMPS POWER IN** #1,#3 : AC220~240V #2 : N.C	⑪ **CN76 - SMPS DC OUT (12V/GND/5V)** #1 : DC 5V #2 : GND #3 : DC 12V	⑫ **CN77 - SMPS DC OUT (19V/GND/310V)** #1 : DC 310V~340V #2,#3 : N.C #4 : DC 19V~27V #5 : AGND
⑬ **CN31 - DOWNLOAD** DOWNLOAD			

8-2 Outdoor PCB (9K/12K)



① **CN151 - SMPS INV** #1 : 15V #2 : GND #3 : ENABLE	② **CN204 - DRED** #1 : DRED1 #2 : DRED2 #3 : DRED3 #4 : GND #5 : 5V	③ **CN201- DOWNLOAD-MAIN** #1 ~ #20 : DOWNLAOD	④ **CN251 - SENSOR** #1,#2 : OUT SENSOR #3,#4 : DISCHARGE SENSOR #5,#6 : COND SENSOR
⑤ **CN501 - EEPROM** #1 : GND #3 : 5V #4 : EEP CS #5 : EEP_SO/MICOM RX #6 : EEP_SI_MICOM_TX #7 : EEP CLK	⑥ **CN701 - EEV-A** #1~#4 : EEV SIGNAL #5 : 12V	⑦ **CN152 - SMPS MAIN** #1 : 12V #2 : GND #3 : 5V	⑧ **CN301 - COMMUNICATION** #1 : F1 #2 : F2
⑨ **CN901 - FAN** #1 : DC 310~340V #2 : N.C #3 : AGND #4 : DC 15V #5 : FAN RPM #6 : FAN FEEDBACK	⑩ **CN401- REACTOR** #1 : REACTOR1 #2 : REACTOR2	⑪ **CN030 - 4WAY** #1,#3 : AC220~240V	⑫ **CN001 - POWER-N** #1 : N
⑬ **CN002 - POWER-L** #1 : L	⑭ **CN003 - EARTH** #1 : EARTH	⑮ **CN150 - SMPS AC** #1,#3 : AC220~240V	⑯ **CN402 - COMP** #1 : W #2 : V #3 : U

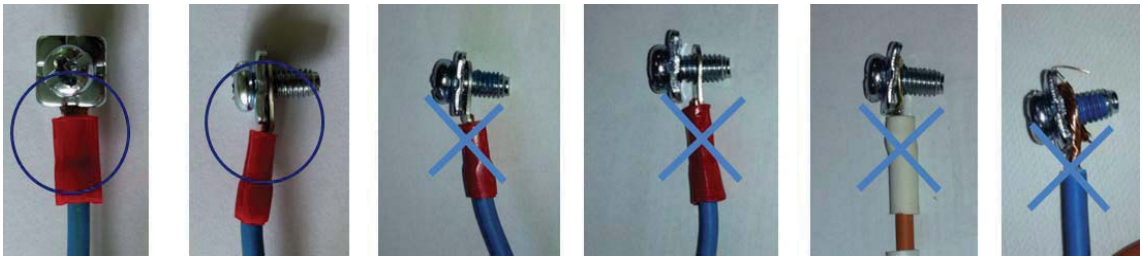
8-3 Wire connecting the indoor unit terminal blocks

1. Terminal press of Ring terminal shall be set facing up before connecting wire.

Is inverted

Terminalhasbeencut.

2. There shall be no empty space between Ring terminal and Screw after Clamp.
   If not, there exists a possibility of fire which can be caused by electric heat in the connecting part.



① ② ③ ④ ⑤ ⑥

①, ② : Good
③ Bad : Ring terminal is connected reversely
④ Bad : Not clamped Screw
⑤ Bad : In the gap between Ring terminal & Screw
⑥ Bad : Unused Ring Terminal

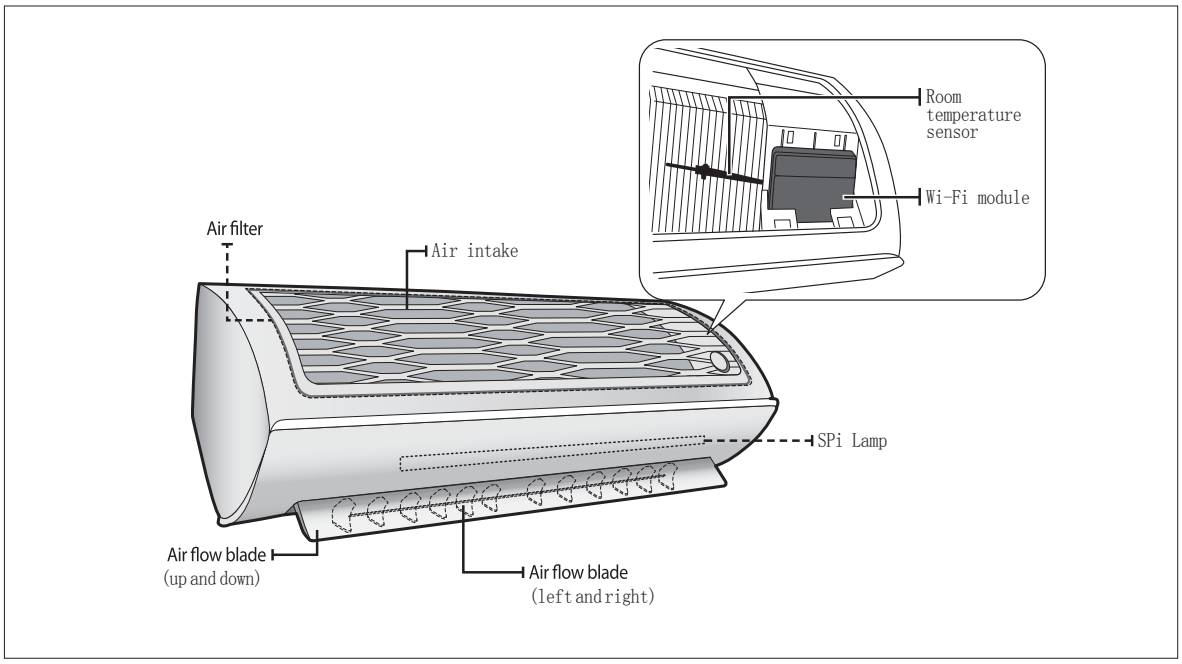
9. Operating Instructions

9-1 Name of Each Part

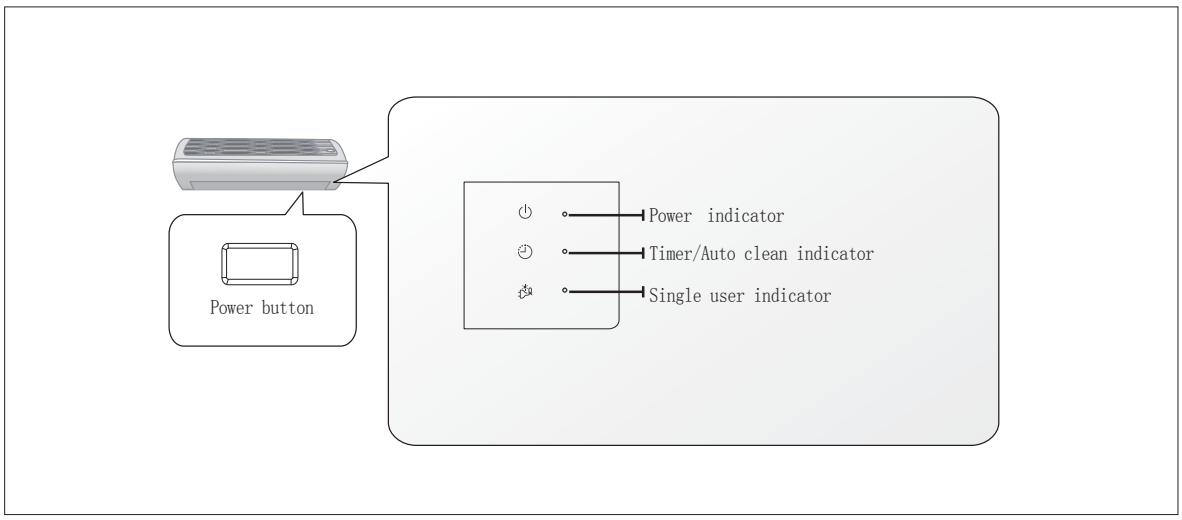
9-1-1 Indoor Unit

The design and shape are subject to change according to the model.

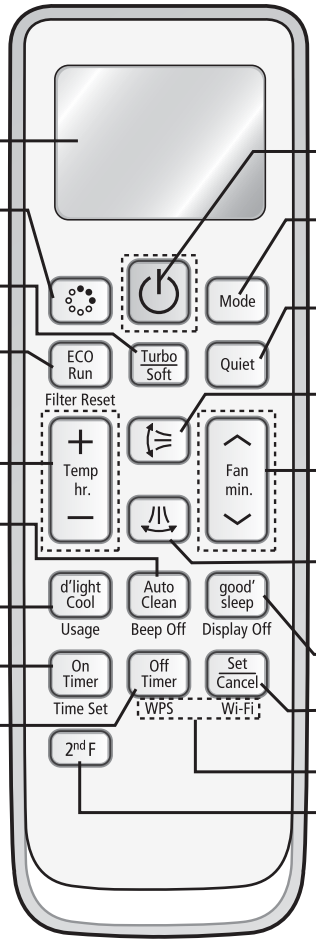
■Main Parts



■Display



9-2 Wireless Remote Control-Buttons and Display



Remote controller display

SPi
Set the **SPi** function on/off.

Turbo / Soft
Select Ultra turbo function or Soft function

ECO Run
Turn on/off the ECO Run function which reduces energy usage while operating in cool/heat mode.

Temp + -
Increase/Decrease the temperature by 1 ˚C.

Auto Clean
Auto clean function – Dry inside of the indoor unit to get rid of odor.

d'light Cool
Set the d'light Cool function on/off.

On Timer
Set the On Timer on.

Off Timer
Set the Off Timer on.

Power
Turn on/off the air conditioner.

Mode
Set one of the 5 operating modes (see pages 15~16 for instructions).

Quiet
Reduce noise generated from an indoor unit during operation.

Vertical air swing
Activate/Deactivate air flow blade movement automatically up and down.

Fan
Adjust how much air flows through the air conditioner with the 5 different fan speeds such as Auto/Low/Medium/High/Turbo.

Horizontal air swing
Activate/Deactivate air flow blade movement automatically left and right.

good'sleep
Set the **good'sleep** mode on.

Set/Cancel
Set/Cancel the timer/**good'sleep** mode.

SMART Air conditioner Network.

2ndF
Switch the function of the button on the remote controller.

Filter Reset
Reset the Filter Clean reminder

Usage
Display the amount of power consumption for few seconds on the indoor unit display:

Beep off
To silence the beep sound when pressing the button.

Display off
To turn off the display light

Time set
Set the current time

10. Troubleshooting

10-1 Items to be checked first

1. The input voltage should be rating voltage ±10% range.
   The air conditioner may not operate properly if the voltage is out of this range.

2. Is the line cable linking the indoor unit and the outdoor unit linked properly?
   The indoor unit and the outdoor unit shall be linked by 5 cables.
   Check the terminals if the indoor unit and outdoor unit are properly linked by the same number of cables.
   Otherwise the air conditioner may not operate properly.

3. When a problem occurs due to the contents illustrated in the table below it is a symptom not related to the malfunction of the air conditioner.

NO	Operation of air conditioner	Explanation
1	The OPERATION indication LED(BLUE) blinks when a power plug of the indoor unit is plugged in for first time.	It indicates power is on. The LED stops blinking if the operation ON/OFF button on the remote control unit is pushed.
2	In a COOL operation mode, the compressor does not operate at a room temperature higher than the setting temperature that the INDOOR FAN should operate. **[In case of heat pump model]** In a HEAT operation mode, the compressor does not operate at a room temperature lower than the setting temperature that indoor fan should operate.	In happens after a delay of 3 minutes when the compressor is reoperated. The same phenomenon occurs when a power is on. As a phenomenon that the compressor is reoperated after a delay of 3 minutes, the indoor fan is adjusted automatically with reference to a temperature of the air blew.
3	Fan speed setting is not allowed in DRY mode.	The speed of the indoor fan is set to LL in DRY mode. Fan speed is selected automatically in AUTO mode.
4	Compressor stops operation intermittently in Dry mode.	Compressor operation is controlled automatically in DRY mode depending on the room temperature and humidity.
5	Timer LED(ORANGE) of the indoor unit lights up and the air conditioner does not operate.	Timer is being activated and the unit is in ready mode. The unit operates normally if the timer operation is cancelled.
6	The compressor stops intermittently in a COOL mode or DRY mode, and fan speed of the indoor unit decreases.	The compressor stops intermittently or the fan speed of the indoor unit decreases to prevent inside/outside air frozen depending on the inside/outside air temperature.
7	**[In case of heat pump model]** Compressor of the outdoor unit is operating although it is turned off in a HEAT mode.	When the unit is turned off while de-ice is activated, the compressor continus operation for up to 9 minutes(maximum) until the deice is completed.
8	**[In case of heat pump model]** The compressor and indoor fan stop intermittenly in HEAT mode.	The compressor and indoor fan stop intermittently if room temperature exceeds a setting temperature in order to protect the compressor from overheated air in a HEAT mode.
9	**[In case of heat pump model]** Indoor fan and outdoor fan stop operation intermittently in a HEAT mode.	The compressor operates in a reverse cycle to remove exterior ice in a HEAT mode, and indoor fan and outdoor fan do not operate intermittently for within 20% of the total heater operation.

10-2 Communication Error

10-2-1 Communication Error

Indoor display

3-LED DISPLAY			7-SEG DISPLAY	DESCRIPTION
LED1	LED2	LED3	E101/E102	Communication error(Indoor<->outdoor)
◎	●	●		

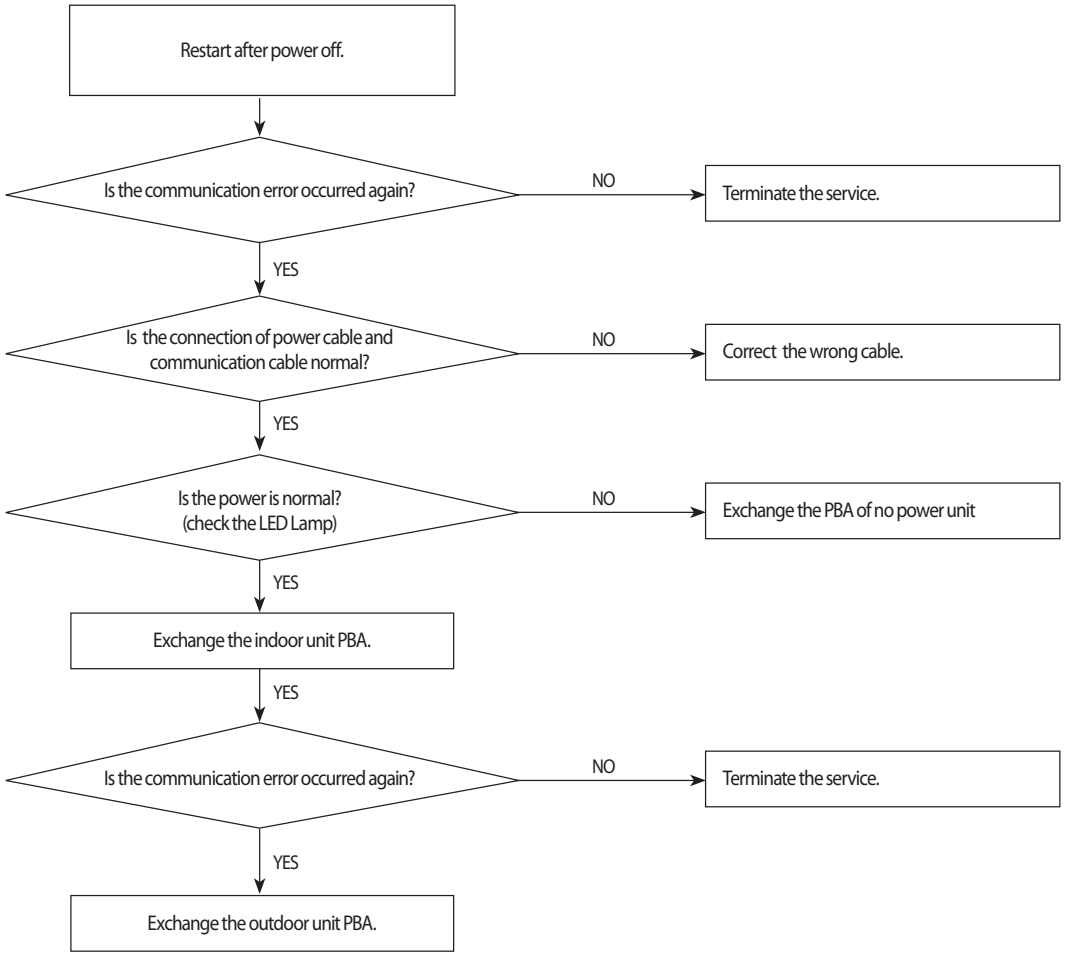
Outdoor display

◎	●	●	1min. Time out Comm.
○	○	●	Abnormal Communication
○	●	●	

● LED ON ◎ LED BLINKING ○ LED OFF

1. Checklist :
   1) Is the cable between the indoor unit and outdoor unit connected correctly?
   2) Isn't the power cable and communication cable cross?

2. Troubleshooting procedure



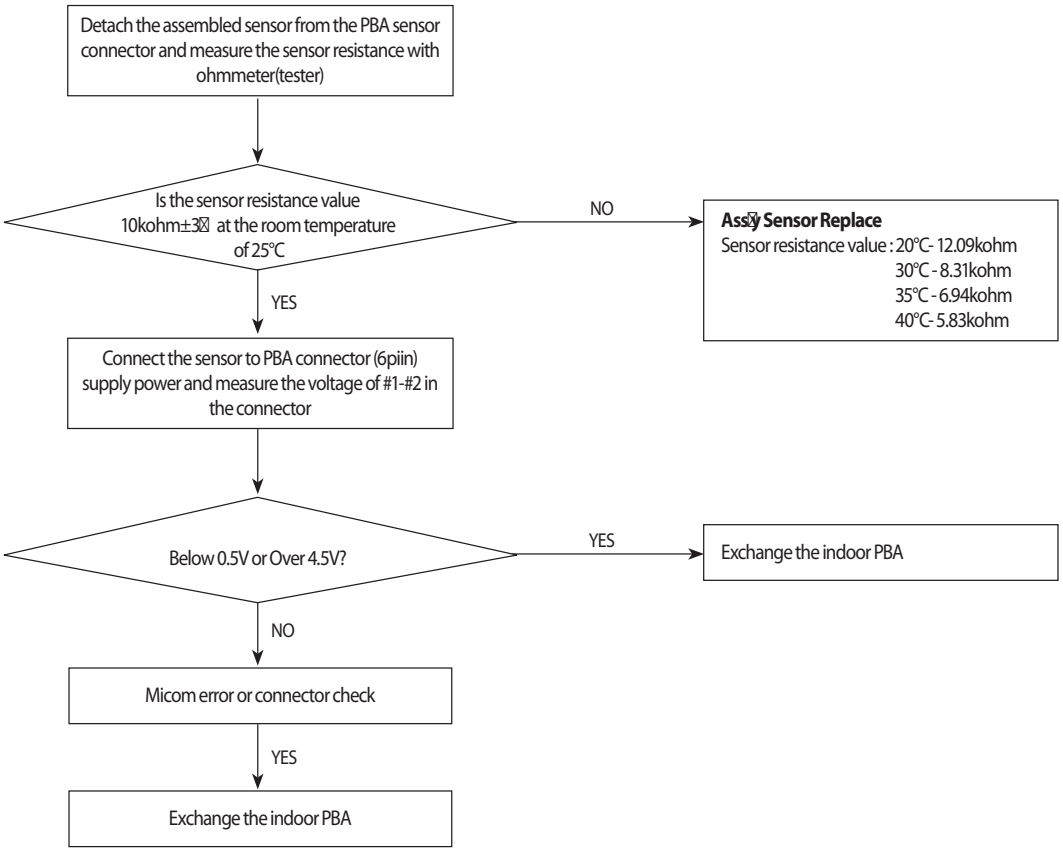
10-2-2 Indoor temperature sensor Error

Indoor display

7-SEG DISPLAY	DESCRIPTION
E121	Indoor room temp sensor error

1. Checklist :
   1) Is the indoor units temperature sensor connected correctly?
   2) Is the sensor placed correctly?
   3) Does the both terminal of sensor satisfy the resistance value in accordance with temperature?

2. Troubleshooting procedure


Detach the assembled sensor from the PBA sensor connector and measure the sensor resistance with ohmmeter(tester)
Is the sensor resistance value 10kohm±3 at the room temperature of 25℃
NO
Ass Sensor Replace
Sensor resistance value : 20℃- 12.09kohm
30℃ - 8.31kohm
35℃ - 6.94kohm
40℃- 5.83kohm
YES
Connect the sensor to PBA connector (6piin) supply power and measure the voltage of #1-#2 in the connector
Below 0.5V or Over 4.5V?
YES
Exchange the indoor PBA
NO
Micom error or connector check
YES
Exchange the indoor PBA

10-2-3 Indoor Eva-in temperature sensor error

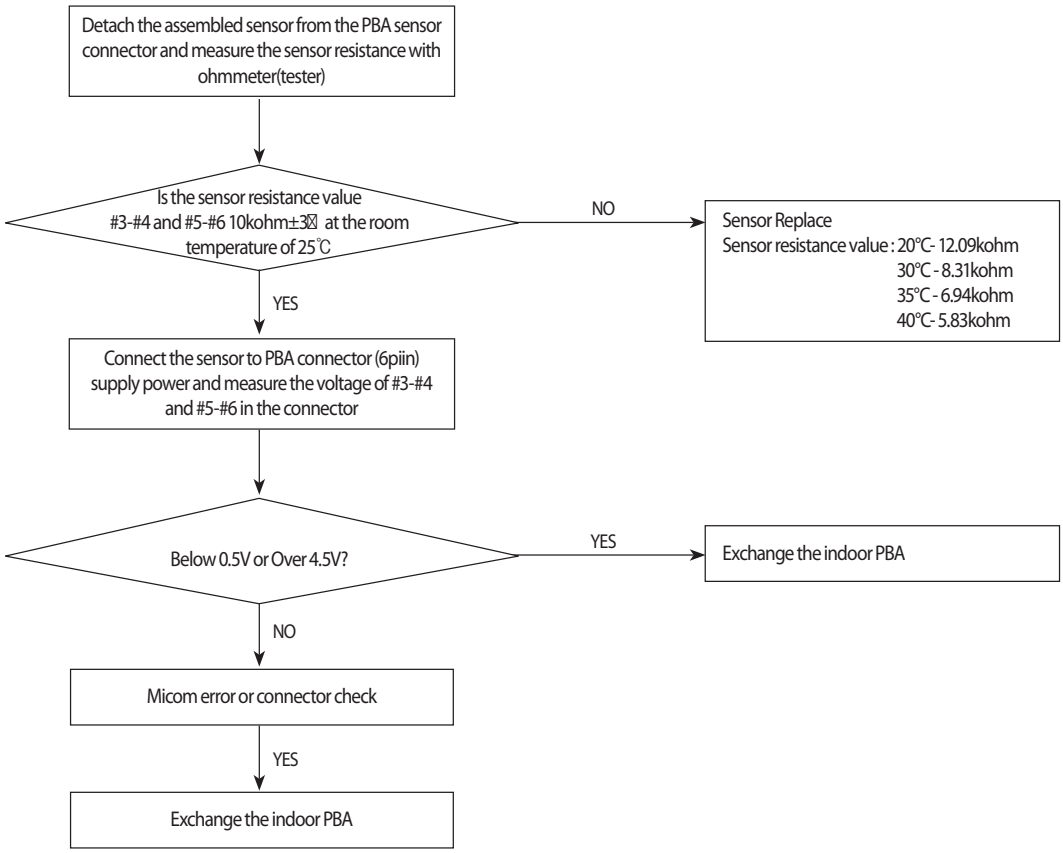
Indoor display

3-LED DISPLAY			7-SEG DISPLAY	DESCRIPTION
LED1	LED2	LED3	E122,E123	Indoor MID, Indoor IN PIPE-TH sensor error
◎	◎	○		

● LED ON ◎ LED BLINKING ○ LED OFF

1. Checklist :
   1) Is the indoor units temperature sensor connected correctly?
   2) Is the sensor placed correctly?
   3) Does the both terminal of sensor satisfy the resistance value in accordance with temperature?

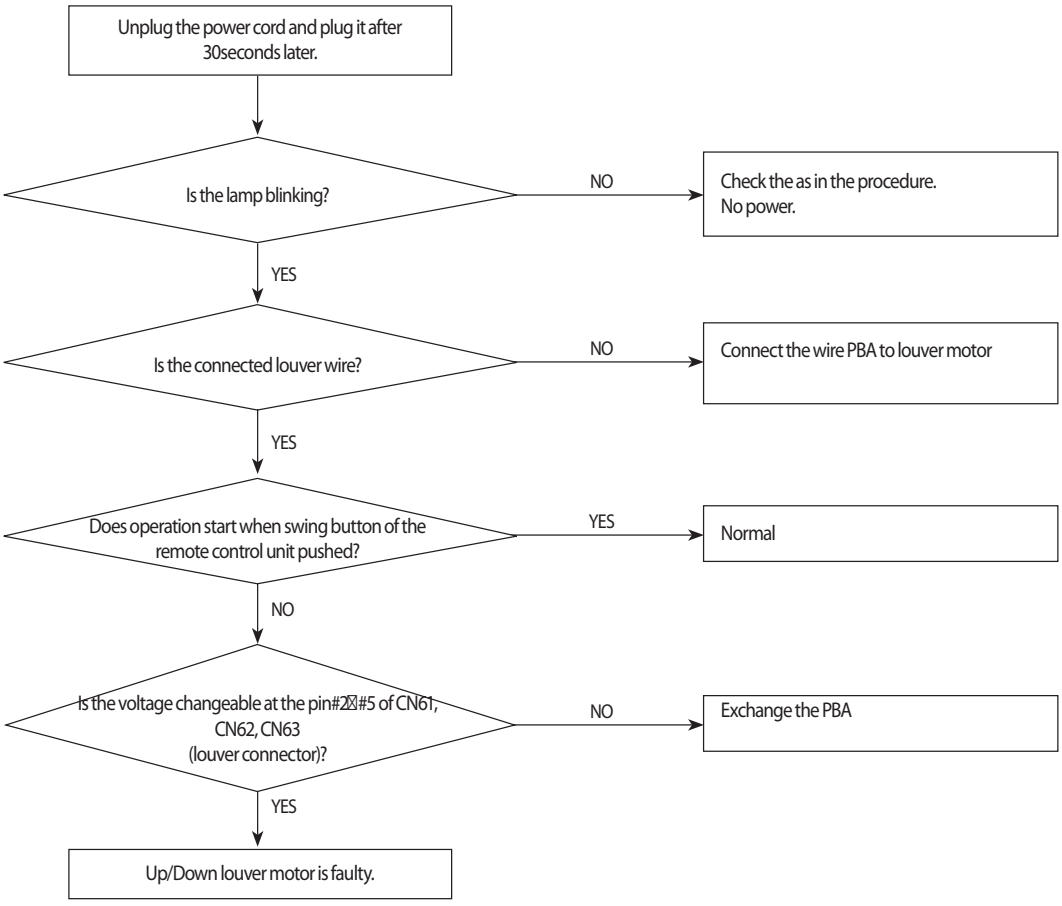
2. Troubleshooting procedure


Detach the assembled sensor from the PBA sensor connector and measure the sensor resistance with ohmmeter(tester)
Is the sensor resistance value #3-#4 and #5-#6 10kohm±3☒ at the room temperature of 25℃
NO
Sensor Replace
Sensor resistance value : 20℃- 12.09kohm
30℃ - 8.31kohm
35℃ - 6.94kohm
40℃- 5.83kohm
YES
Connect the sensor to PBA connector (6piin) supply power and measure the voltage of #3-#4 and #5-#6 in the connector
Below 0.5V or Over 4.5V?
YES
Exchange the indoor PBA
NO
Micom error or connector check
YES
Exchange the indoor PBA

10-2-4 When the Up/Down, Left/Right, Grill louver motor does not operate (Initial Diagnosis) (Not displayed)

1. Checklist :
   1) Is the input power voltage normal?
   2) Is the Up/Down louver motor properly connected with the connector? (CN61, CN62, CN63)

2. Troubleshooting procedure


Unplug the power cord and plug it after 30seconds later.
Is the lamp blinking?
NO
Check the as in the procedure.
No power.
YES
Is the connected louver wire?
NO
Connect the wire PBA to louver motor
YES
Does operation start when swing button of the remote control unit pushed?
YES
Normal
NO
Is the voltage changeable at the pin#2~#5 of CN61, CN62, CN63 (louver connector)?
NO
Exchange the PBA
YES
Up/Down louver motor is faulty.

10-2-5 Indoor fan motor speed detecting error (BLDC fan)

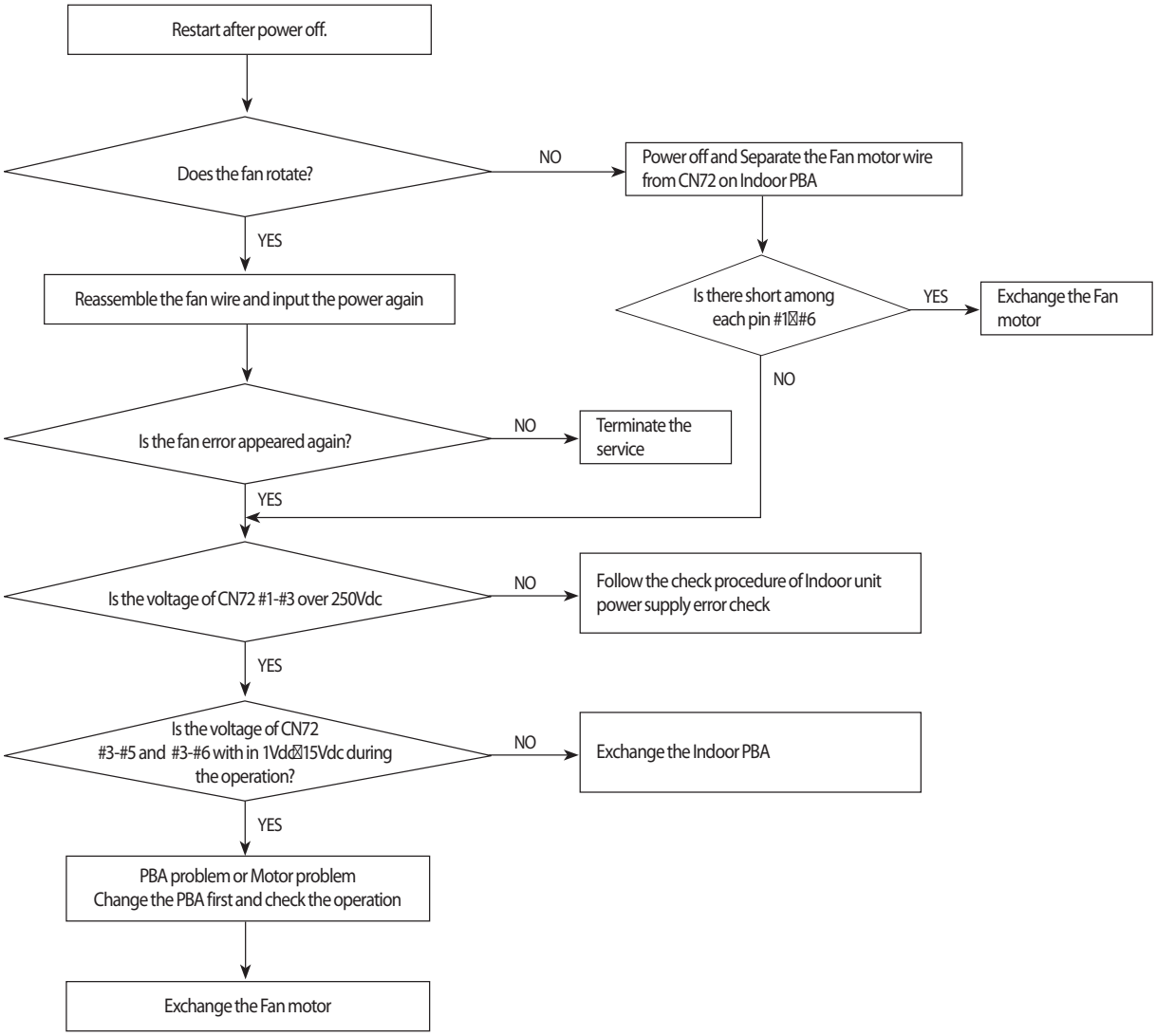
Indoor display

3-LED DISPLAY			7-SEG DISPLAY	DESCRIPTION
LED1	LED2	LED3	E154	Indoor fan error
○	○	◎		

● LED ON ◎ LED BLINKING ○ LED OFF

1. Checklist :
   1) Is the indoor units fan motor properly connected with the connector(CN72)?
   2) Is the AC voltage correct?

2. Troubleshooting procedure


Restart after power off.
Does the fan rotate?
NO
Power off and Separate the Fan motor wire from CN72 on Indoor PBA
YES
Reassemble the fan wire and input the power again
Is there short among each pin #1⊠#6
YES
Exchange the Fan motor
NO
Is the fan error appeared again?
NO
Terminate the service
YES
Is the voltage of CN72 #1-#3 over 250Vdc
NO
Follow the check procedure of Indoor unit power supply error check
YES
Is the voltage of CN72 #3-#5 and #3-#6 with in 1Vdc⊠15Vdc during the operation?
NO
Exchange the Indoor PBA
YES
PBA problem or Motor problem
Change the PBA first and check the operation
Exchange the Fan motor

10-2-9 Outdoor Discharge over temperature error

Indoor display

3-LED DISPLAY			7-SEG DISPLAY	DESCRIPTION
LED1	LED2	LED3	E416	Outdoor Discharge over temperature error
◎	○	◎		

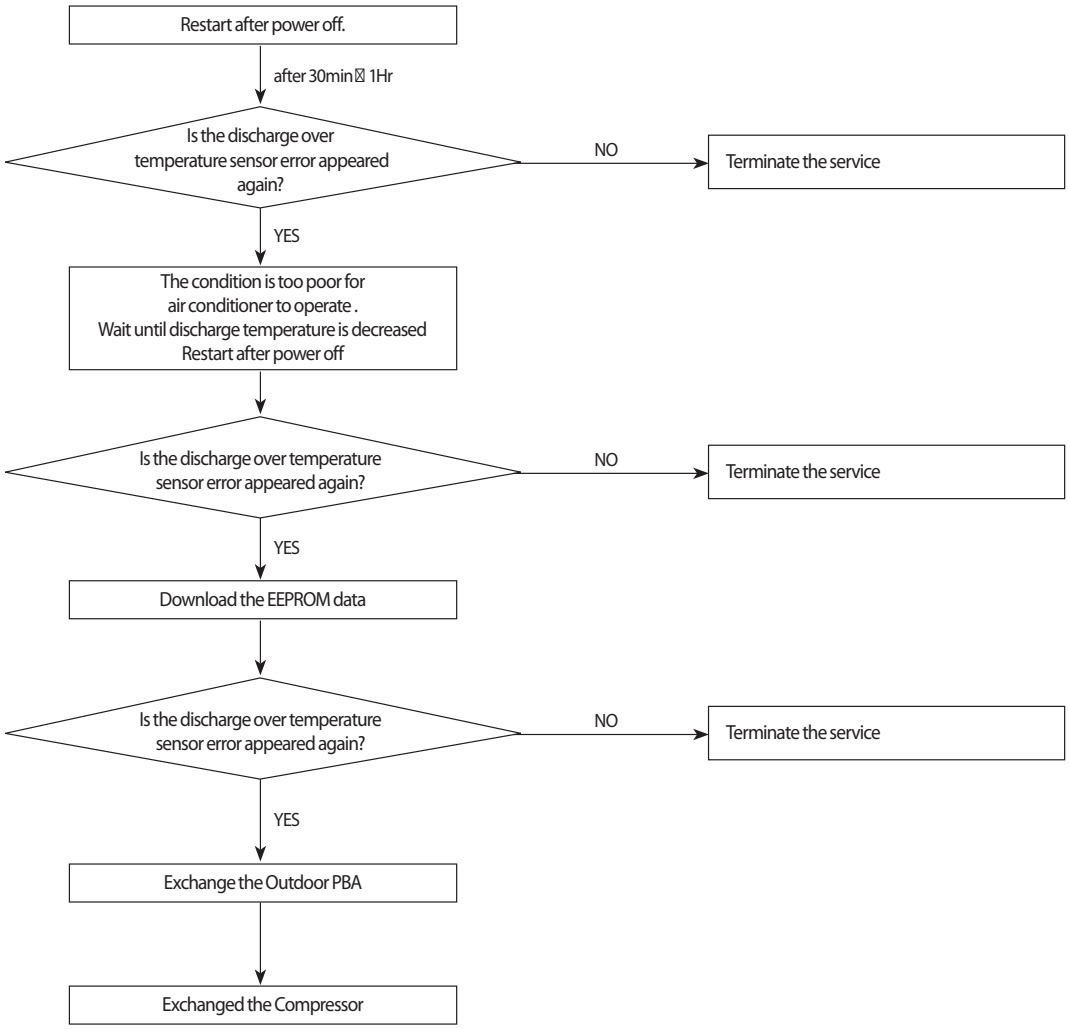
Outdoor display

◎	◎	●	Outdoor Discharge over temperature error

● LED ON ◎ LED BLINKING ○ LED OFF

1. Checklist :
   1) Check the discharge temperature in the outdoor unit
   2) Check the compressor locking or gas leak
   3) Download the EEPROM data

2. Troubleshooting procedure


Restart after power off.
after 30min ~ 1Hr
Is the discharge over temperature sensor error appeared again?
NO
Terminate the service
YES
The condition is too poor for air conditioner to operate .
Wait until discharge temperature is decreased
Restart after power off
Is the discharge over temperature sensor error appeared again?
NO
Terminate the service
YES
Download the EEPROM data
Is the discharge over temperature sensor error appeared again?
NO
Terminate the service
YES
Exchange the Outdoor PBA
Exchanged the Compressor

10-2-11 Compressor starting error

Indoor display

3-LED DISPLAY			7-SEG DISPLAY	DESCRIPTION
LED1	LED2	LED3	E461	Comp starting error
◎	○	◎		

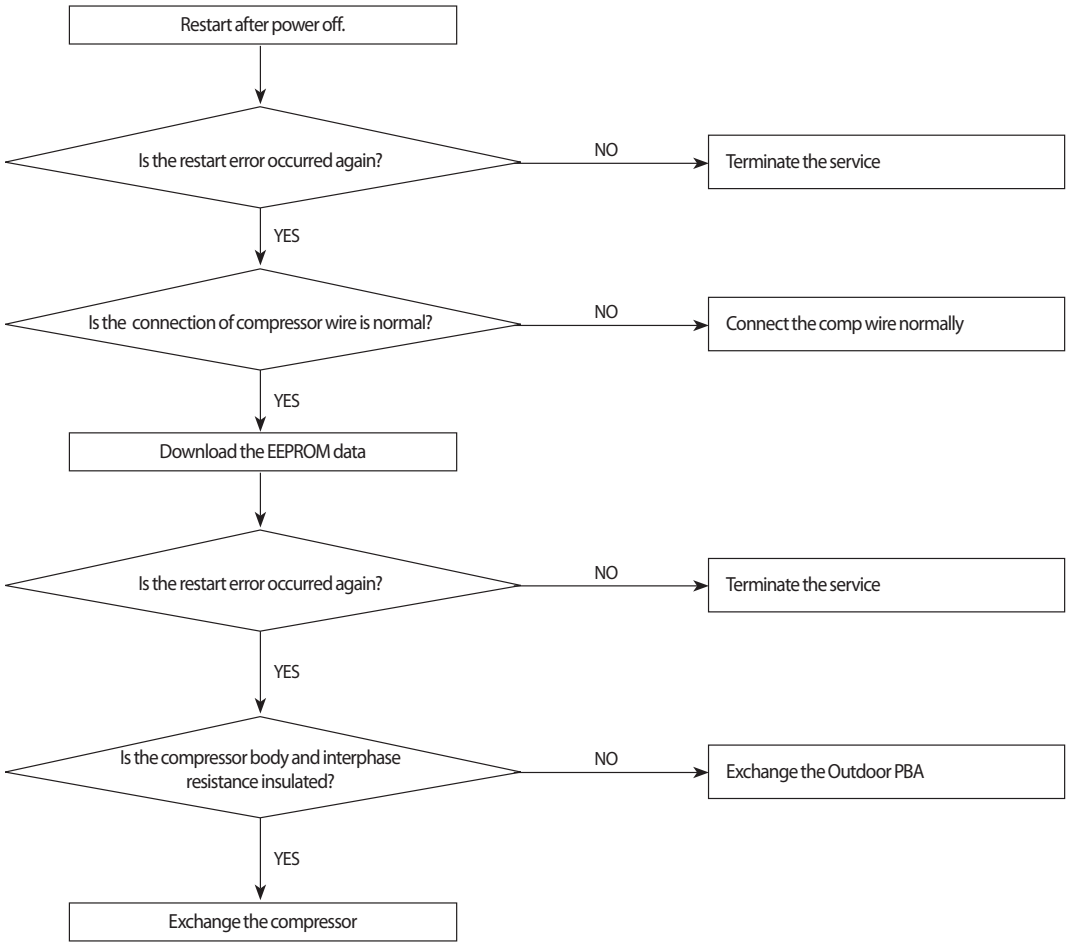
Outdoor display

○	◎	○	Comp starting error

● LED ON ◎ LED BLINKING ○ LED OFF

1. Checklist :
   1) Is the connection of cable for the compressor?
   2) Is the compressor wire is connected clockwise? U(RED)-V(BLU)-W(YEL)
   3) Is the interphase resistance of compressor normal?

2. Troubleshooting procedure



10-2-12 Compressor wire missing error/rotation error

Indoor display

3-LED DISPLAY			7-SEG DISPLAY	DESCRIPTION
LED1	LED2	LED3	E467	Compressor wire missing errorr/rotation error
◎	○	◎		

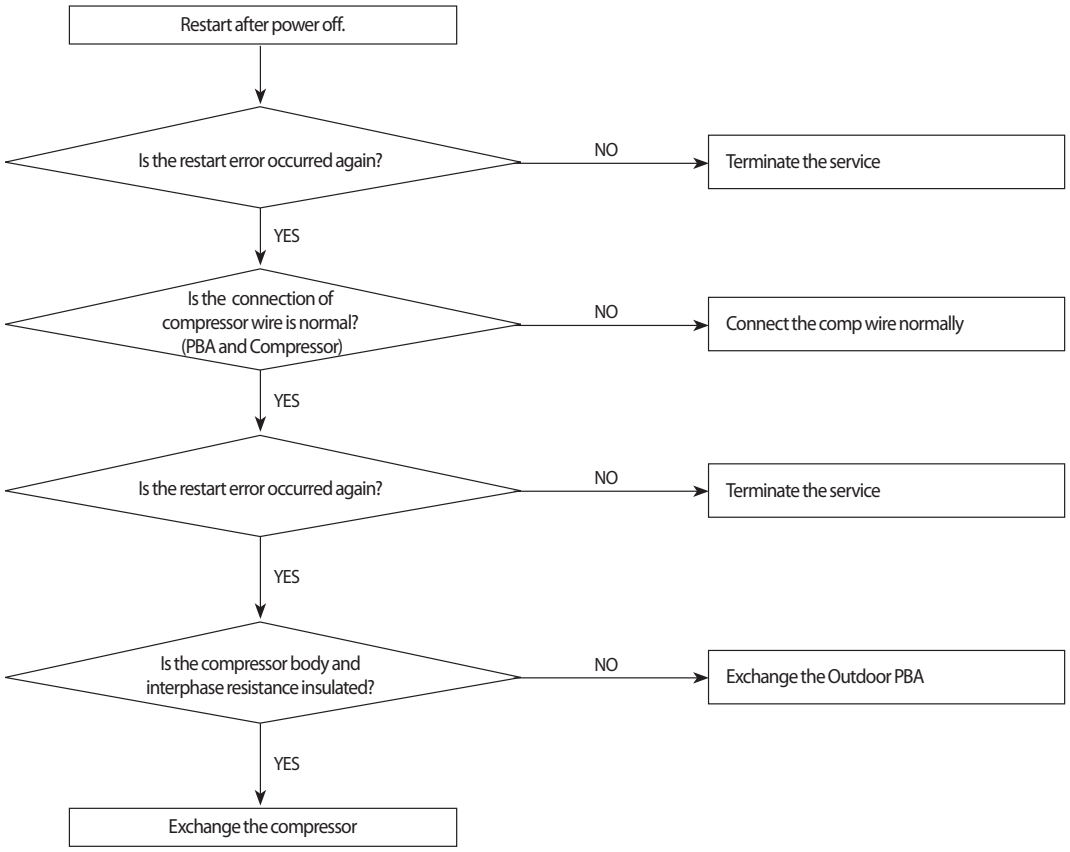
Outdoor display

●	○	●	Compressor wire missing error/rotation error

● LED ON ◎ LED BLINKING ○ LED OFF

1. Checklist :
   1) Is the connection of cable for the compressor?
   2) Is the compressor wire is connected clockwise? U(RED)-V(BLU)-W(YEL)
   3) Is the interphase resistance of compressor normal?

2. Troubleshooting procedure



10-2-13 O.C(Over Current) error

Indoor display

3-LED DISPLAY			7-SEG DISPLAY	DESCRIPTION
LED1	LED2	LED3	E464	IPM Over Current(O.C) Error
◎	○	◎		

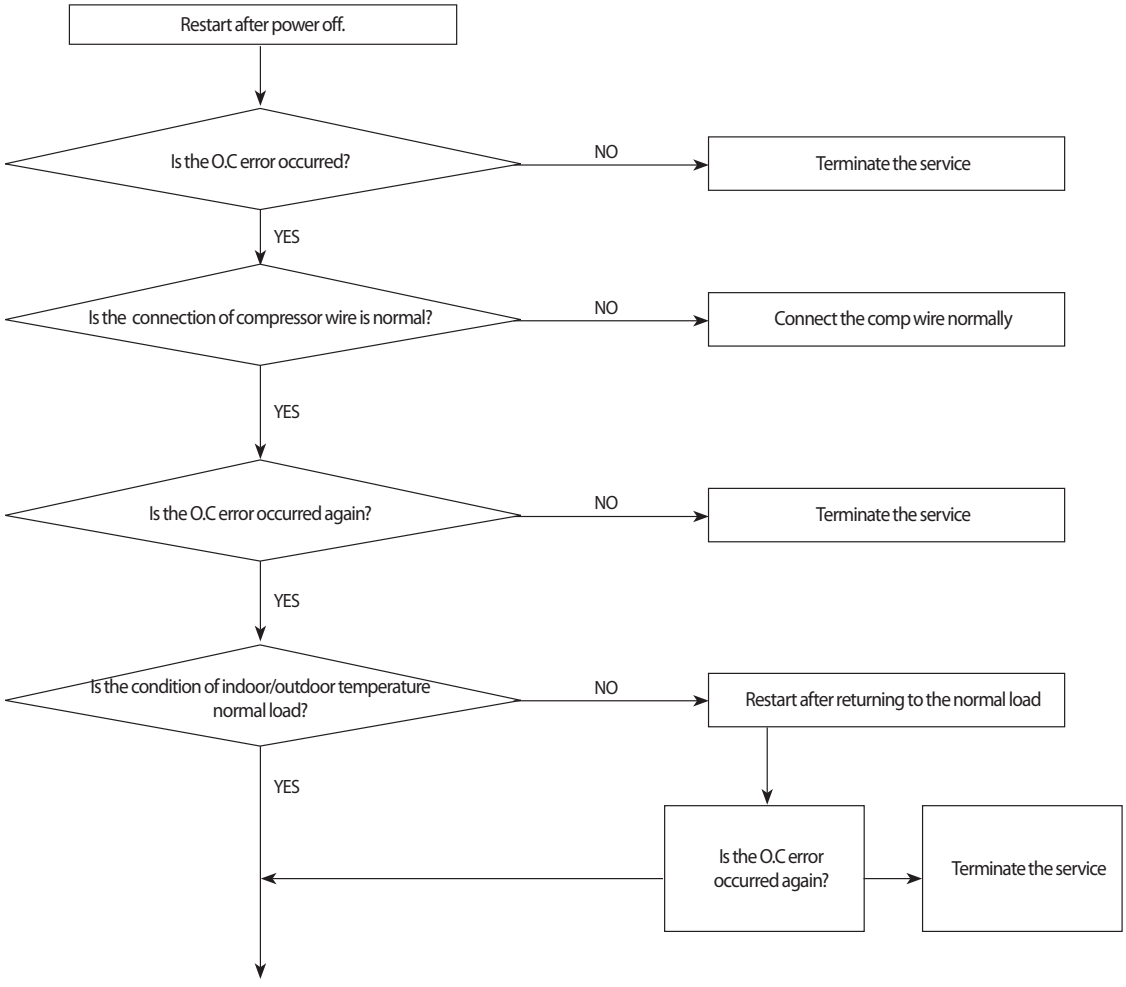
Outdoor display

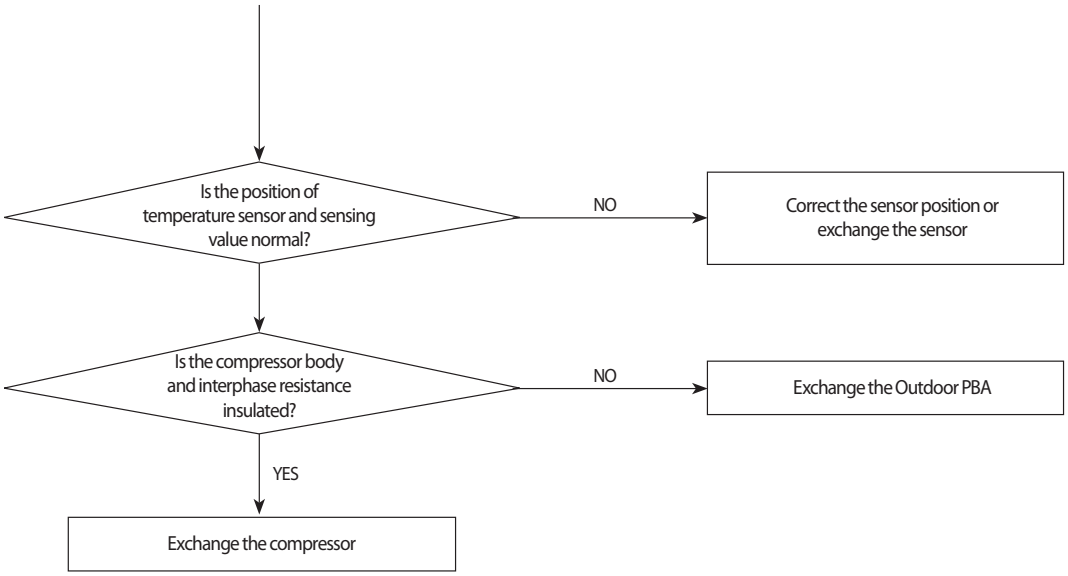
○	○	◎	IPM Over Current(O.C) Error

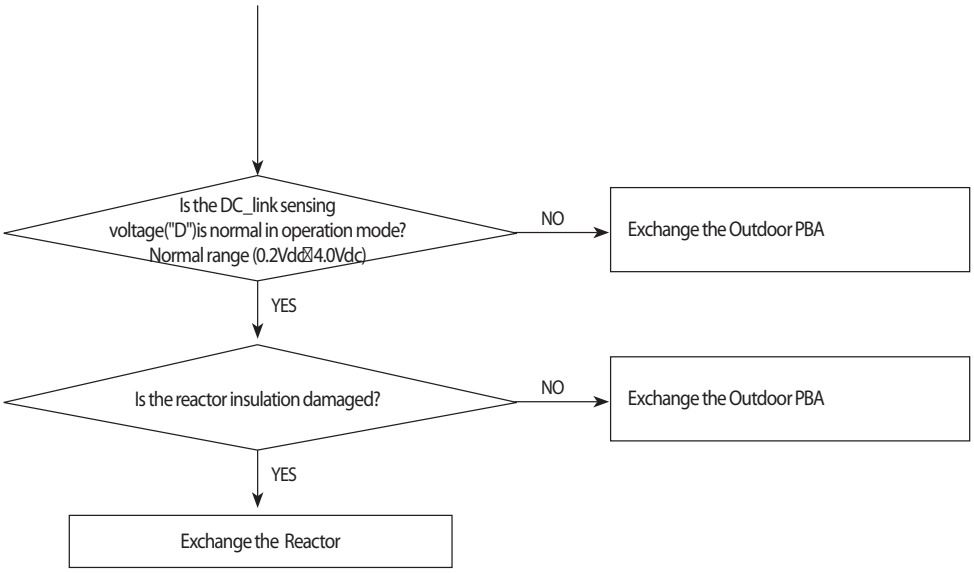
● LED ON ◎ LED BLINKING ○ LED OFF

1. Checklist :
   1) Is the IPM Shunt resistance value correct? Check the resistor is opened
   2) Is the condition of surrounding temperature abnormal overload?
   3) Is there any problem as like the temperature sensor separation or measurement value error?
   4) Is the interphase resistance of compressor normal?

2. Troubleshooting procedure




Is the position of temperature sensor and sensing value normal?
NO
Correct the sensor position or exchange the sensor
Is the compressor body and interphase resistance insulated?
NO
Exchange the Outdoor PBA
YES
Exchange the compressor


Is the DC_link sensing
voltage("D")is normal in operation mode?
Normal range (0.2Vdc~4.0Vdc)
NO
Exchange the Outdoor PBA
YES
Is the reactor insulation damaged?
NO
Exchange the Outdoor PBA
YES
Exchange the Reactor

10-2-19 Heatsink sensor error/Heatsink over heat

Indoor display

3-LED DISPLAY			7-SEG DISPLAY	DESCRIPTION
LED1	LED2	LED3		
◎	○	◎	E474	Heatsink sensor error
			E500	Heatsink Over Temperature Error

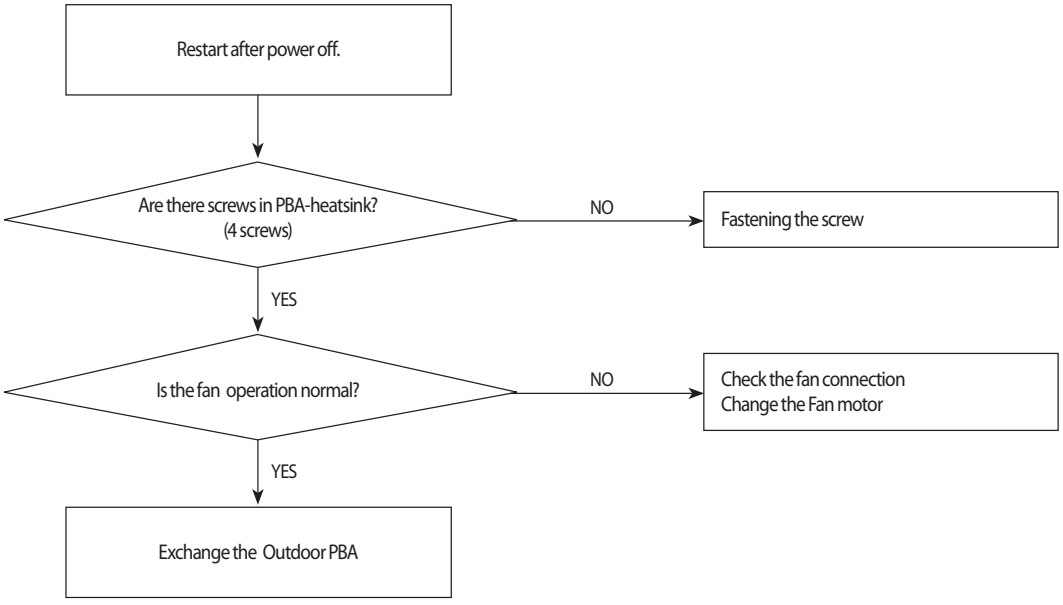
Outdoor display

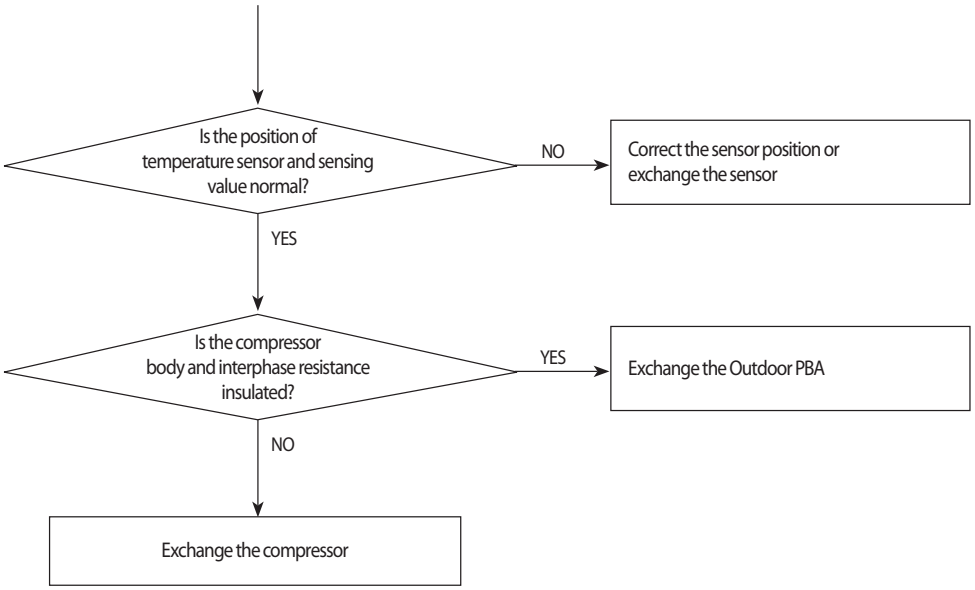
◎	◎	●	Heatsink sensor error
◎	●	○	Heatsink Over Temperature Error

● LED ON ◎ LED BLINKING ○ LED OFF

1. Checklist :
   1) Are there screws assembly in PBA-heatsink?
   2) Is the gap PBA-heatsink
   3) Is the fan operation normal?
   4) Is the cover assembly in control-box normal?

2. Troubleshooting procedure




Is the position of temperature sensor and sensing value normal?
NO
Correct the sensor position or exchange the sensor
YES
Is the compressor body and interphase resistance insulated?
YES
Exchange the Outdoor PBA
NO
Exchange the compressor

10-2-22 Operation condition secession error

Indoor display

3-LED DISPLAY			7-SEG DISPLAY	DESCRIPTION
LED1	LED2	LED3		
◎	○	◎	E440	Prohibit Operation Condition Error (Heating)
			E441	Prohibit Operation Condition Error (Cooling)

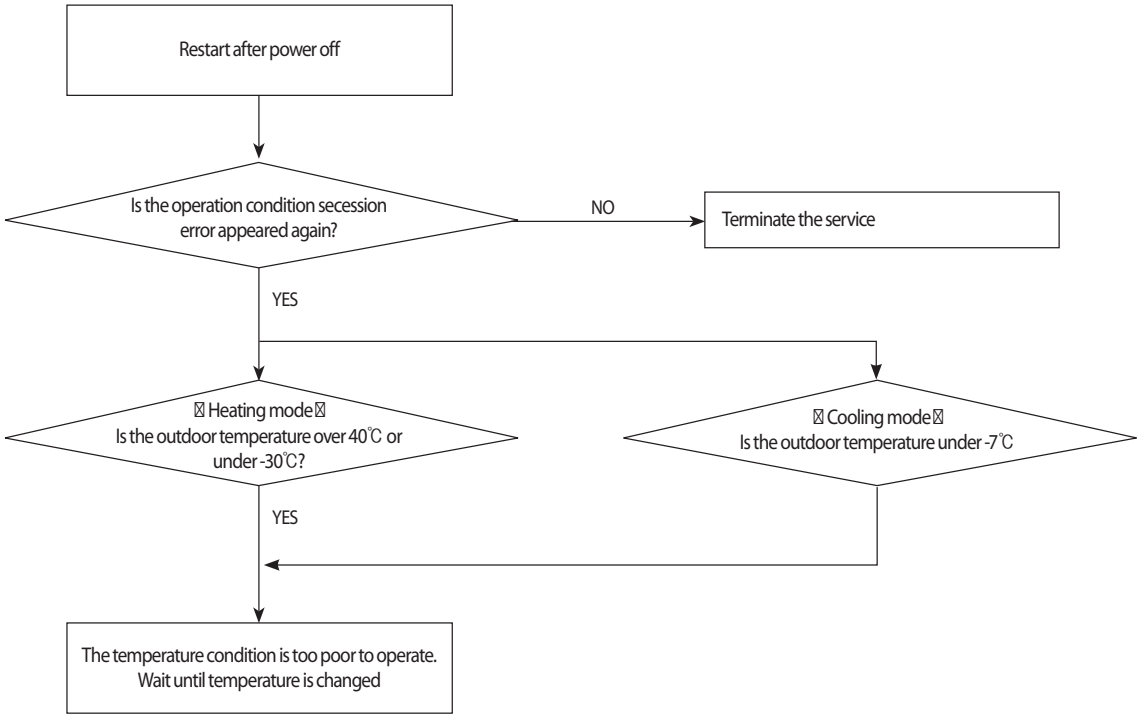
Outdoor display

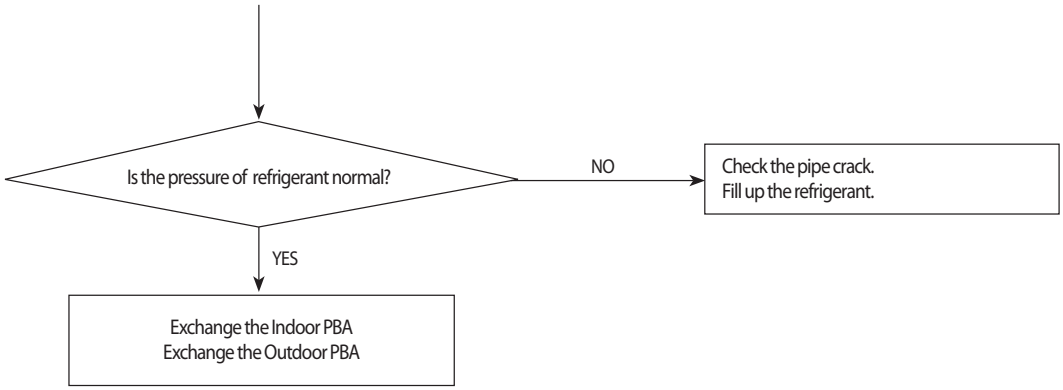
●	◎	○	Operation condition secession

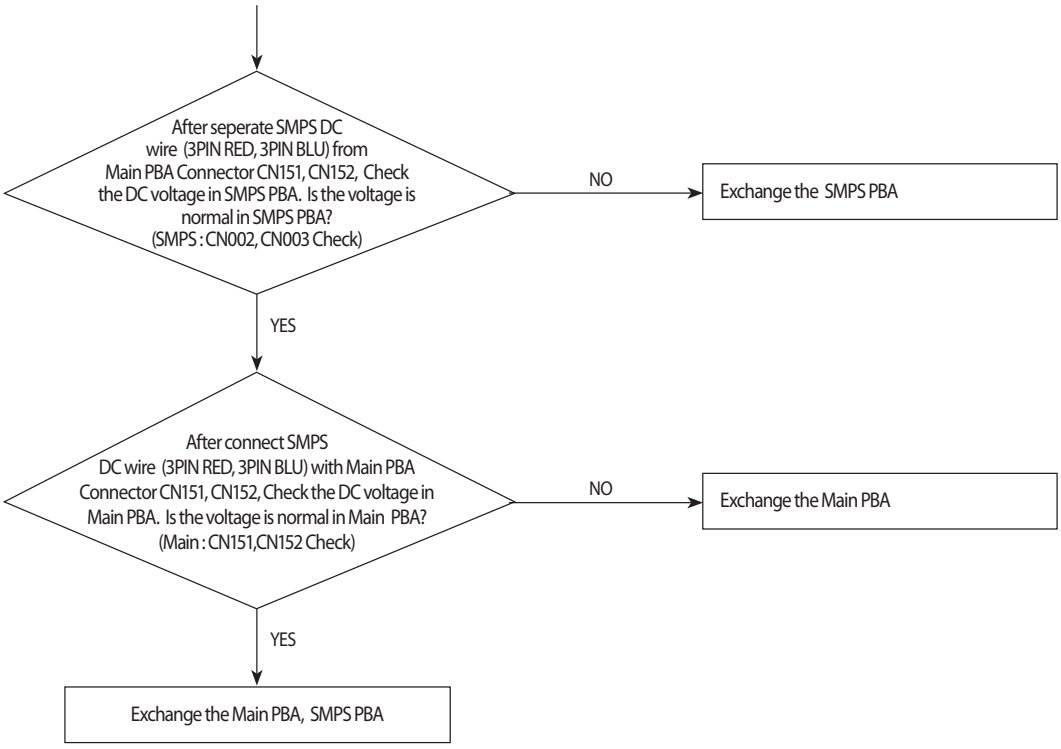
● LED ON ◎ LED BLINKING ○ LED OFF

1. Checklist :
   1) Check the temperature around the outdoor unit.

2. Troubleshooting procedure


Restart after power off
Is the operation condition secession error appeared again?
NO
Terminate the service
YES
Heating mode
Is the outdoor temperature over 40℃ or under -30℃?
Cooling mode
Is the outdoor temperature under -7℃
YES
The temperature condition is too poor to operate. Wait until temperature is changed


Is the pressure of refrigerant normal?
NO
Check the pipe crack.
Fill up the refrigerant.
YES
Exchange the Indoor PBA
Exchange the Outdoor PBA


After seperate SMPS DC wire (3PIN RED, 3PIN BLU) from Main PBA Connector CN151, CN152, Check the DC voltage in SMPS PBA. Is the voltage is normal in SMPS PBA? (SMPS : CN002, CN003 Check)
NO
Exchange the SMPS PBA
YES
After connect SMPS DC wire (3PIN RED, 3PIN BLU) with Main PBA Connector CN151, CN152, Check the DC voltage in Main PBA. Is the voltage is normal in Main PBA? (Main : CN151,CN152 Check)
NO
Exchange the Main PBA
YES
Exchange the Main PBA, SMPS PBA

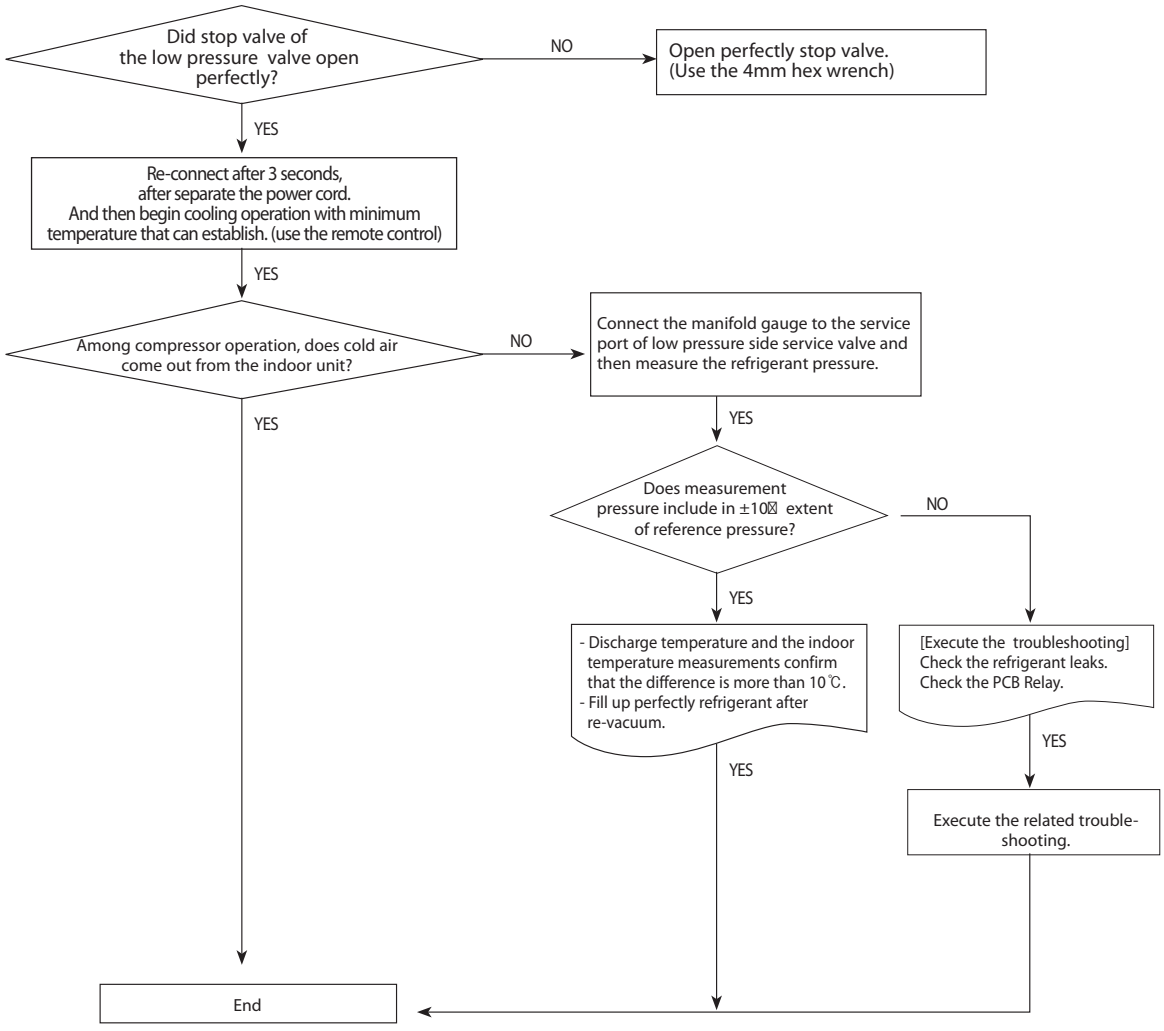
10-2-28 When the remote control is not receiving

1. Checklist :
    1) Check if the connector was normally assembled.
    2) Check the battery in remote control
    3) All the lights out and check again : Change electronic typed to a fluorescent light
    4) Put the set in operation and check the voltage of display PBA
    5) Replace the display PBA

10-2-30 10-3-18 Smart Install error

1. Checklist :
   1) Check the leakage region.(Use leakage detection liquid or soapy water)
   2) When leakage region is found from service valve and piping connection flare nut part : After the related measures to check the refrigerant supplements and operation.
   3) If the leakage region is pipe welding part : Weld leakage region after refrigerant gas release.(Brass parts should only apply)
   4) If the leakage region is surface area (Heat exchanger or pipe welding region is not) : Replace parts.
   5) Check the PBA Relay
      - Display of indoor unit : Ensure that the operating pilot lamp has been lighted.
      - Ensure that the Relay input voltage of indoor unit PBA is normally.(If the PBA is defective, replace)

2. Troubleshooting procedure


Did stop valve of the low pressure valve open perfectly?
NO
Open perfectly stop valve. (Use the 4mm hex wrench)
YES
Re-connect after 3 seconds, after separate the power cord. And then begin cooling operation with minimum temperature that can establish. (use the remote control)
YES
Among compressor operation, does cold air come out from the indoor unit?
NO
Connect the manifold gauge to the service port of low pressure side service valve and then measure the refrigerant pressure.
YES
YES
Does measurement pressure include in ±10 extent of reference pressure?
NO
YES
- Discharge temperature and the indoor temperature measurements confirm that the difference is more than 10℃.
- Fill up perfectly refrigerant after re-vacuum.
[Execute the troubleshooting] Check the refrigerant leaks. Check the PCB Relay.
YES
YES
Execute the related trouble-shooting.
End

10-3 PCB Inspection Method

10-3-1 Pre-inspection Notices

1. Check if you pulled out the AC power plug when you eliminate the PCB or front panel.
2. Don't hold the PCB side not impose excessive force on it to eliminate the PCB.
3. Don't pull the lead wire but hold the whole housing to connect or disconnect a connector to the PCB.
4. In case of outdoor PCB disassembly, check first the complete discharge of condenser after 1 minute power off.

10-3-2 Inspection procedure

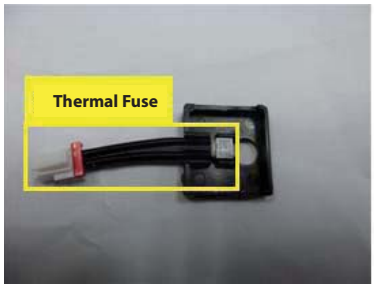
1. Check connector connection and peeling of PCB or bronze coating pattern when you think the PCB is broken.
2. The PCB is composed of 3 parts.
   . Indoor Main part : MICOM and surrounding circuit, relay, fan motor sensing and driving circuit, temperature sensing circuit power circuit of SMPS, buzzer circuit. Communication circuit.
   . Display part : LED lamp, Switch, Remote-control module.
   . Outdoor Main part : MICOM and surround circuit, fan motor sensing and driving circuit, compressor driving circuit power circuit of SMPS, PFC control circuit, 4way circuit, communication circuit, OPTION.(EEV control circuit, temperature sensing circuit)

10-3-3 Indoor detailed inspection procedure

No	procedure	Inspection Method	Cause
1	Plug out and pull the PCB out of the control box Check the PCB fuse.	1) Is 1st fuse disconnected? 2) Is 2nd fuse disconnected?	. Over current. . Indoor Fan motor short. . AC part and pattern short of Indoor PBA.
2	Supply power If the operating lamp twinkles at this time , the above 1)~3) have no relation.	Check the power voltage	
		1) Is the BD71 input voltage 200Vac ~240Vac?	. Power cord is fault, Fuse open, Wrong Power cable Wiring, AC part is faulty.
		2) Is the voltage between both terminal of C111(+)-(-) 12Vdc?	. Switching Trans of Power circuit is faulty.
		3) Is the voltage between both terminal of C118(+)-(-) 5Vdc?	. Power circuit is faulty, Load short.
3	Press the ON/OFF button. 1. Fan speed(high) 2. Continuous Operation	1) Is the voltage over DC 270V being imposed on terminal #1~#3 of fanmotor connector(CN72)?	. Fan motor of the indoor is faulty.
		2) The fan motor of the indoor unit doesn't run.	. Fan motor connector(CN72) is faulty.
		3) The power voltage between terminal #1-#3 of the connector(CN72) is 0V.	. PBA is faulty.

■ New Function [Indoor Terminal Block Safety Device]

1. Thermal Fuse is installed in Terminal Block as below.
(Thermal Fuse is used to prevent PL caused by a defective connection of indoor and outdoor units)

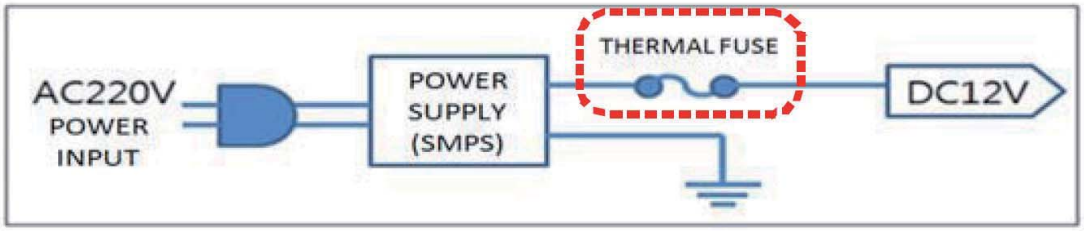


Terminal Block Internals

Connection of terminal block and Main PBA

2. Thermal Fuse is opened when internal temperature of Terminal Block goes to a certain point due to Tracking caused by a defective connection of indoor and outdoor units.

- When Thermal Fuse is opened, Main PBA (DC12V) is turned off and the indoor unit does not operate. (There is no problem with Main PBA in this case)
- In the above case, the change of all-in-one Terminal Block will make Main PBA operate again.



Circuit Block

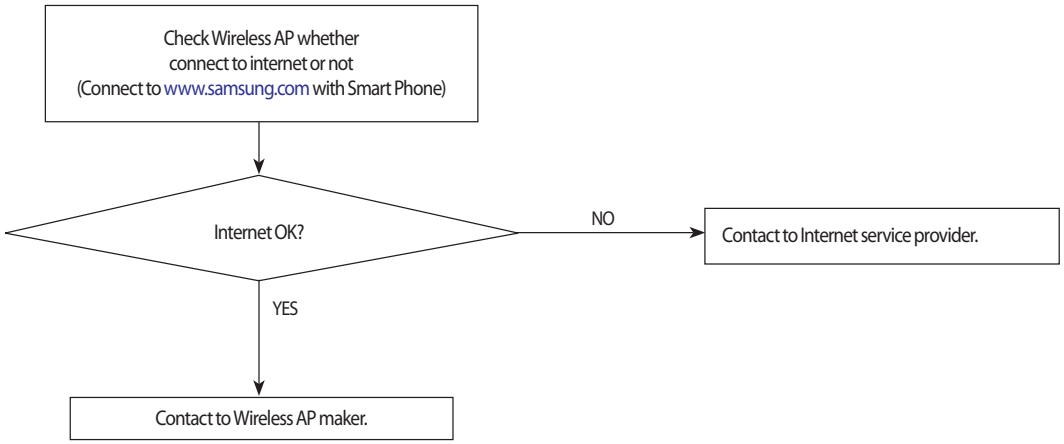
3. Measurement method of fair/defective thermal fuse

Fail

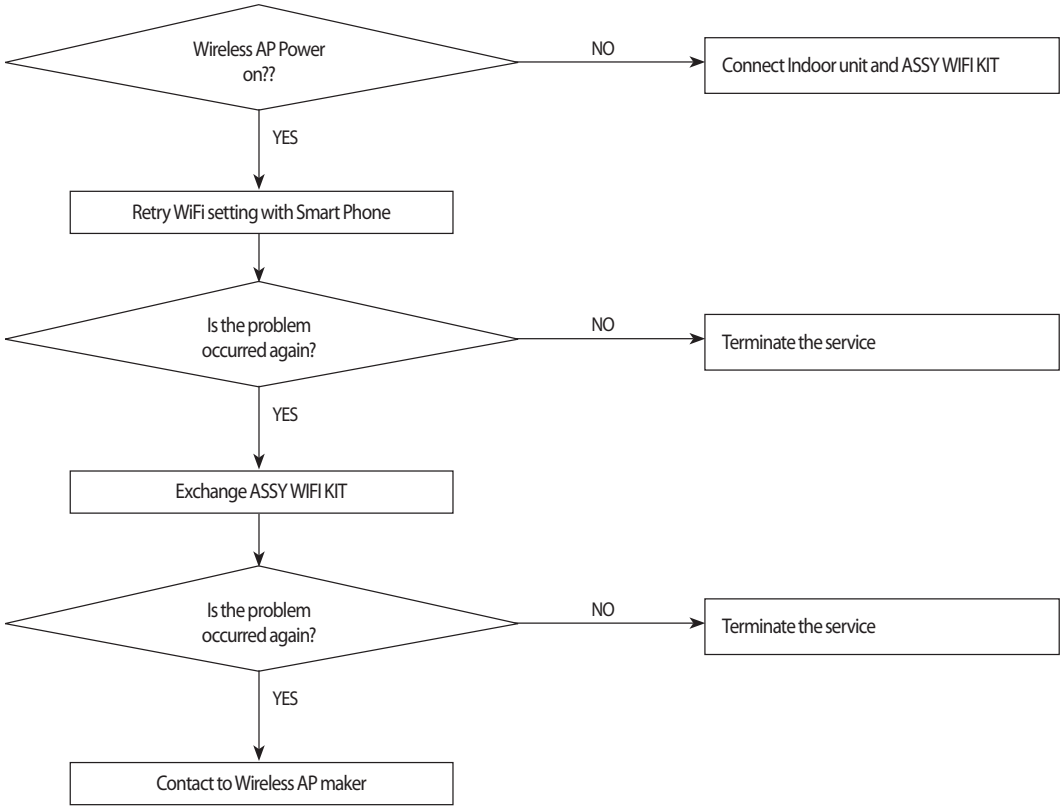
Defective

10-4 ASSY WIFI KIT Inspection Method

10-4-1 Status-LED Blinking with interval 0.5s



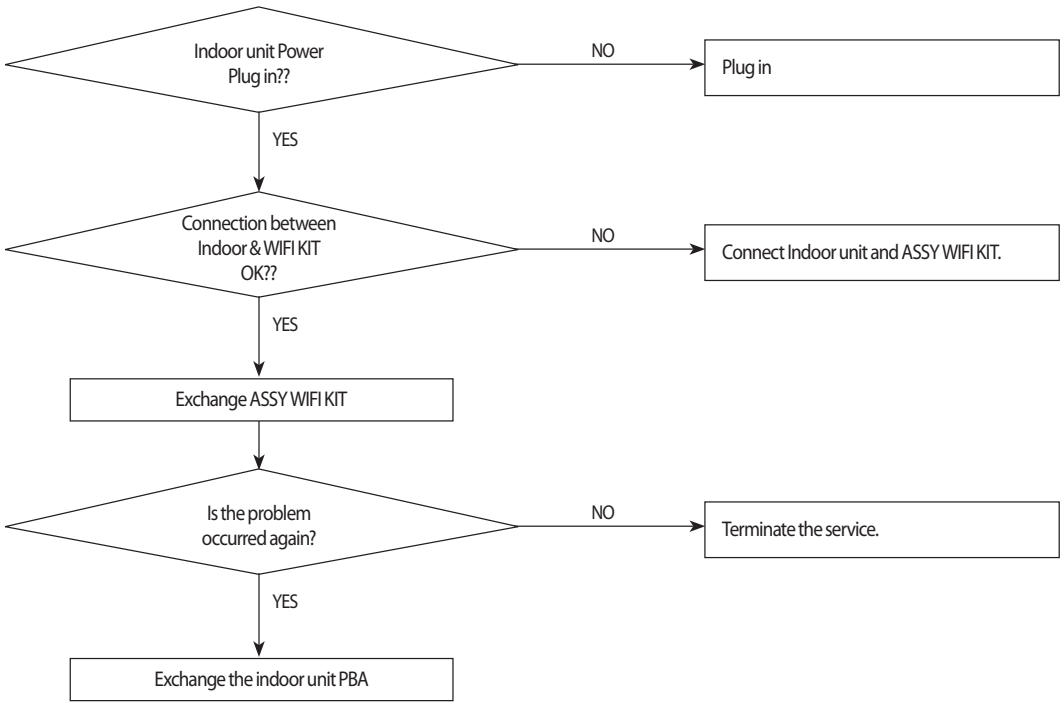
10-4-2 Status-LED Blinking with interval 3s



<< Status LED Indication >>

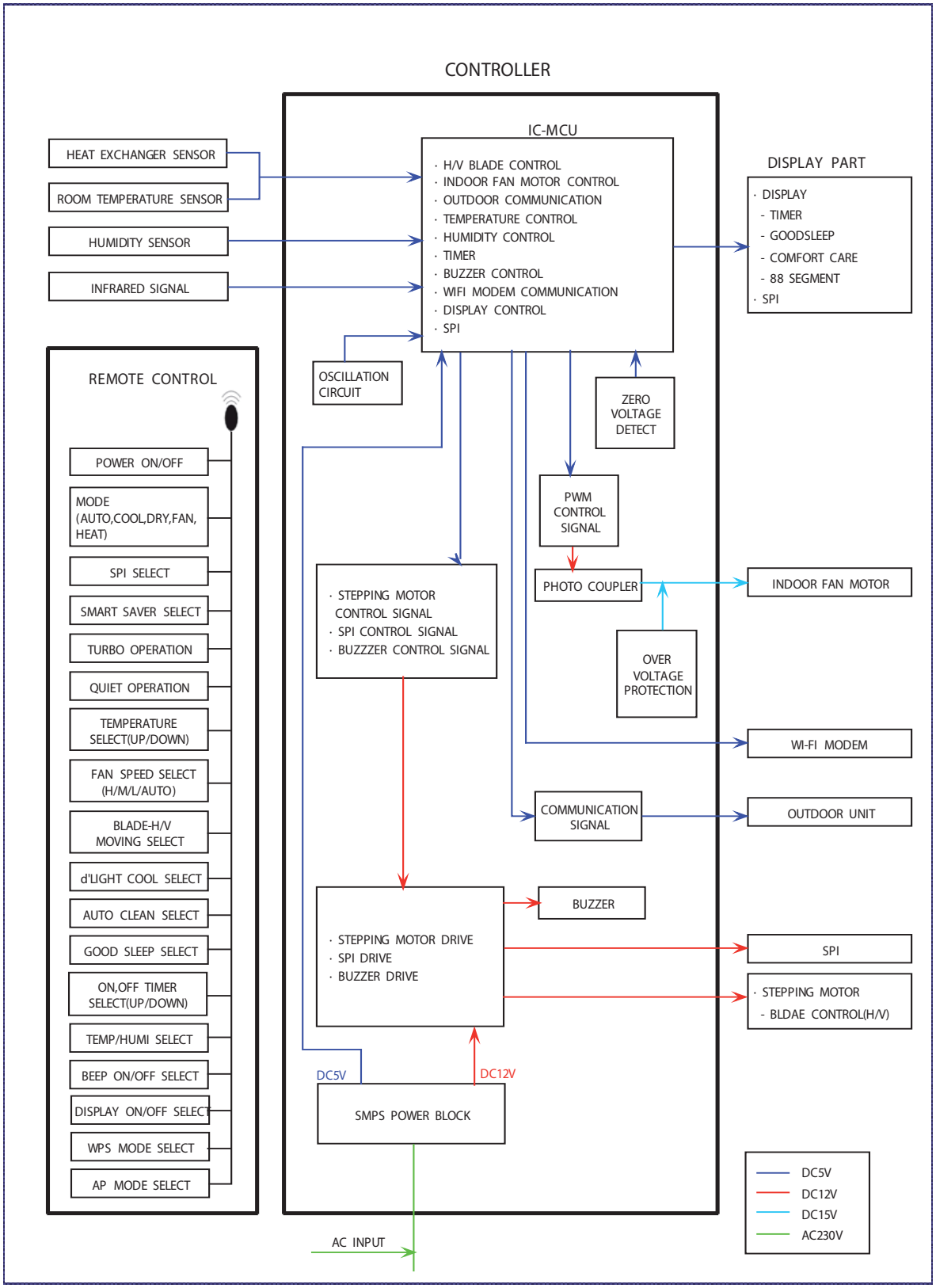
1. LED ON : Connected with AP & INTERNET
2. LED Blinking (Interval of 0.5s) : Connected with AP but not connected with INTERNET
3. LED Blinking (Interval of 3s) : Not connected with AP
4. LED OFF : Not connected with Air Conditioner

10-4-3 Status-LED OFF

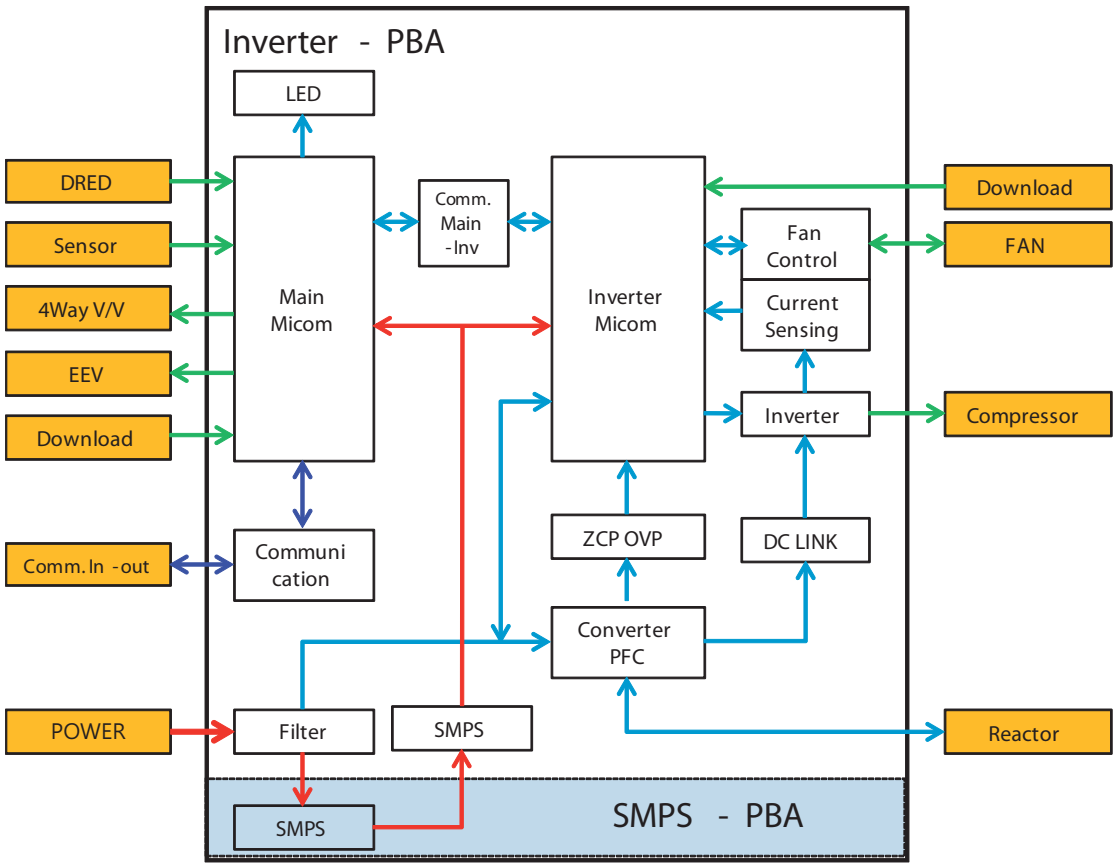


11. Block Diagram

11-1 Indoor unit



11-2 Outdoor unit



11-2-1 Pre-inspection Notices

1. Check if you pulled out the AC power plug when you eliminate the PCB or front panel
2. Don't hold the PCB side not impose excessive force on it to eliminate the PCB
3. Don't pull the lead wire but hold the whole housing to connect or disconnect a connector to the PCB
4. In case of outdoor PCB disassembly, check first the complete discharge of condenser after 1 minute power off

11-2-2 Inspection procedure

1. Check connector connection and peeling of PCB or bronze coating pattern when you think the PCB is broken
2. The PCB is composed of 3 parts
   - Indoor Main part : MICOM and surrounding circuit, relay, fan motor sensing and driving circuit, temperature sensing circuit power circuit of SMPS, buzzer circuit. Communication circuit
   - Display part : LED lamp, Switch, Remote-control module
   - Outdoor Main part : MICOM and surround circuit, fan motor sensing and driving circuit, compressor driving circuit power circuit of SMPS, PFC control circuit, 4way circuit, communication circuit, OPTION (EEV control circuit, temperature sensing circuit)

11-2-3 Indoor detailed inspection procedure

No	Procedure	Inspection Method	Cause
1	Plug out and pull the PCB out of the control box Check the PCB fuse	1) Is 1st fuse disconnected? 2) Is 2nd fuse disconnected?	. Over current . Indoor Fan motor short . AC part and pattern short of Indoor PBA
2	Supply power If the operating lamp twinkles at this time , the above 1)~3) have no relation	Check the power voltage	
		1) Is the BD71 input voltage 200Vac~240Vac?	. Power cord is fault, Fuse open, Wrong Power cable Wiring, AC part is faulty
		2) Is the voltage between both terminal of IC02 pin #1-#2 12Vdc?	. Switching Trans of Power circuit is faulty
		3) Is the voltage between both terminal of IC02 pin #2-#3 5Vdc?	. Power circuit is faulty, Load short
3	Press the ON/OFF button 1. Fan speed(high) 2. Continuous Operation	1) Is the voltage over AC 180V being imposed on terminal #3-#5 of fan motor connector (CN72)?	. Fan motor of the indoor is faulty
		2) The fan motor of the indoor unit doesn't run	. Fan motor connector(CN72) is faulty
		3) The power voltage between terminal #3-#5 of the connector(CN72) is 0V	. PBA is faulty

11-2-4 Outdoor detailed inspection procedure

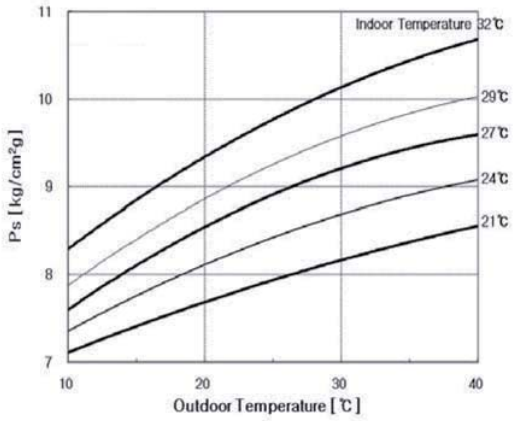
No	Procedure	Inspection Method	Cause
1	Plug out and pull the PCB out of the control box Check the PCB fuse (Wait 3 minutes after power off)	1) Is 1st fuse disconnected?	. Over current . AC part and pattern short of Outdoor PBA
2	Check the Wiring	1) Is the Compressor wire connected clock-wise? 2) Is the Reactor wire connected normal? 3) Is the Fan wire connected normal? 4) Is the 4way wire connected normal? 5) Is the sensor wire connected normal? 6) Is the EEV wire connected normal?	. Wrong assembly . Installation(service) condition is bad
3	"Supply power and operate the set (Use Remote-control, button in indoor set)"	Check the power voltage	
		1) Is the voltage between Terminal block L-N 200Vac~240Vac?	. Power cord is faulty, Wrong Power cable Wiring
		2) Is the C006 voltage 200Vac~240Vac?	. Fuse open . L,N,F1,F2 wire wrong wiring (Terminal Block-PBA)
		2) Is the CN150 voltage 200Vac~240Vac?	. Power circuit is faulty . Load short
		4) Is the PFC050(#26-#27) voltage 200Vac~240Vac after 3 minutes later?	. Fuse open . L,N,F1,F2 wire wrong wiring (Terminal Block-PBA) . PTC020 open . RY021, RY022 is faulty . Outdoor Micom(IC201) error
		5) Is the CE101 voltage 280Vdc~320dc after 3 minutes later?	. PFC050 is faulty . Reactor wire is wrong connection . Power circuit is faulty, Load short . BLDC Fan motor error
		6) Is the voltage CN151 #1-#2 voltage 15Vdc?	. Switching Trans of Power circuit is faulty . Load short
		7) Is the voltage CN152 #1-#2 voltage 12Vdc?	. Switching Trans of Power circuit is faulty . Load short
		8) Is the voltage CN151 #3-#2 voltage 5Vdc?	. Switching Trans of Power circuit is faulty . Load short
4	Check the LED lamp display	1) Normal : RED on, GRN blink, YEL off 2) Abnormal - All off : check no power - abnormal display : check error mode	. F1,F2 wire wrong wiring . Outdoor PBA is faulty

12. Reference Sheet

12-1 Low Refrigerant Pressure Distribution

Note : Please measure the refrigerant pressure after the air conditioner operates on testing cooling mode during more than 10 minutes.

■ **Indoor Temp. Variation : 20°C ~ 32°C**
■ **Outdoor Temp. Variation : -5°C ~ 45°C**



12-2 Pressure & Capacity mark

■ **Power/Heat**

W	cal/s	kcal/h	Btu/h	HP	kg.m/s	lb.m/s
1	0.23885	0.85985	3.4121	0.001341	0.10197	0.73756
4.1868	1	3.6	14.286	0.0056146	0.42693	3.088
1.163	0.27778	1	3.9683	0.0015596	0.11859	0.85778
0.29307	0.06999	0.252	1	3.9302×10^{-4}	0.029885	0.21616
745.7	178.11	641.19	2,544.4	1	76.04	550
9.8067	2.3423	8.4322	33.462	0.013151	1	7.233
1.3558	0.32383	1.0658	4.6262	0.0018182	0.13826	1

12-3 Q & A for Non-trouble

Classification	Class	Description
Cooling	Q	**The cooling is weak.**
	A	When it is hot outside, its cooling capacity decreases due to the increase of the ambient temperature. When the dust filter gets blocked or warm outside air gets in, the cooling capacity will decrease. So, make sure to clean the dust filter frequently, prevent heat loss by closing the doors and insulate the cooling area by using curtains, blinds, shades or window tinting.
	Q	**The cooling is good generally. But, it gets weak when it is considerably hot.**
	A	It occurs when the outdoor unit is exposed to direct sun light and heat-up air is not ventilated well. So, set up a sunblind over the outdoor unit and keep stuff away from the unit to increase the ventilation. When the cooling capacity decreases during a heat wave, clean the heat exchanger of the outdoor unit or spray some cold water to the heat exchanger to increase the cooling capability.
	Q	**The cooling is weak. Does it need refrigerant charging?**
	A	It is not correct charging refrigerant regularly. Except that you have moved in several times or the connection pipes are broken, the refrigerant does not run low. So, when refrigerant is additionally charged, it could be costly and cause a product's failure. When the refrigerant leaks, all of it will escape in a short time resulting in cooling failure and no water coming out of the drain hose. So, if water comes out from the drain hose, it indicates the normal operation of the product and it does not need refrigerant charging.
	Q	**It fails to do cooling.**
	A	When the air conditioner is set to ventilation or the desired temperature is set higher than the current temperature, it fails to do cooling. In this case, select cooling or set the desired temperature lower.
Leakage	Q	**It floods the floor.**
	A	Place the drain hose properly. When it is not placed properly, the drain water would flow back flooding the floor. So, straighten out the drain hose for the water to be drained well.
	Q	**Water drips at the drain connection (service valve) of the outdoor unit.**
	A	When a glass bottle is taken out of the refrigerator, moisture gets condensed on its surface due to the temperature differences. The same principle applies to the air conditioner. When cold refrigerant goes through the copper tube, moisture gets condensed on the surface of the tube and the connection areas. To prevent the water condensation, the pipes are insulated. But, the connection areas of the outdoor unit are not insulated for the purpose of maintenance or repair, and water gets condensed due to the temperature differences and drips down. Generally, it evaporates right away. But, when it drips much during muggy days, put a water pan on the floor.
	Q	**It leaks even though a drain pump is used.**
	A	It occurs when the drain pump is plugged out or it is out of order. Check the power of the drain pump and the position of the drain hose, and when the pump is faulty, contact the drain pump manufacturer. Samsung Electronics do not manufacture drain pumps. So, we are not able to correct the drain pump problems.
Smells	Q	**Whenever the air conditioner is turned on, it irritates my eyes and gives me a headache.**
	A	There are no components in the air conditioner irritating the eyes and sending out chemical smells. But, when the air conditioner is turned on, other smell sources are sucked into the air conditioner and get out of it. So find and root out the smell sources. Generally, it occurs at a interior renovated place, a pharmacy, a gasoline handling place, a tire shop, a second-hand book shop or an electronic component handling place, when its chemical or musty smells are sucked in and sent out, it can be misled that the air conditioner generates them.

Classification	Class	Description
Smells	Q	**Whenever the air conditioner is turned on, it stinks.**
	A	When are no components in the air conditioner sending out chemical smells. But, when the air conditioner is turned on, other smell sources are sucked into the air conditioner and get out of it. So, find and root out the smell sources. Generally, when the drain hose is taken out to the washing room or there are sources of smells such as a diaper bin, a shoe shelf or a socks bin, bad smells generate. Also, it occurs where glass cleaners or air fresheners are used; when they are sucked in interacting with dusts and moistures inside, bad smells generate. these kinds of organic materials noxious to human bodies. So, we recommend against the use of them.
	Q	**Whenever the air conditioner is turned on, it smells sour.**
	A	When the room is papered recently, its paste smells would be sucked inside. Also, when the air conditioner is installed in the study room of young boys loving sweat-generating activities such as the basketball, excessive sweats evaporate and get sucked into the air conditioner resulting in bad smells. So, find and root out problem or refresh the room frequently.
	Q	**Whenever the air conditioner is turned on, it smells musty.**
	A	It is due to the improper keeping of the product after its use. When keeping the product, dry up the inside with the operation of ventilation to prevent must. When the product is kept without drying up the inside with ventilation, mold would grow inside resulting in must. So, open the windows and switch on the ventilation function to get rid of the saturated smell inside.
	Q	**Whenever the air conditioner is turned on, it sends out bad smells such as stale smells.**
	A	It occurs generally when there are pet animals in the house. Their smells stay at the same place. But, when the air conditioner is turned on, the air gets circulated resulting in the circulation of the smells. So, find and root out the problem or refresh the room frequently.
	Q	**It sends out bad smells.**
	A	When the air filter is filthy, it could send out bad smells. So, clean the filter and ventilate the room with the windows open while operating the ventilation function.
Operation	Q	**It won't start.**
	A	There is a power failure or it is plugged out. Also, check if the power distribution panel is switched off.
	Q	**It goes off during operation.**
	A	When the hot air does not escape properly, it goes off during operation. it occurs when it does not ventilate properly because the outdoor unit is covered, the back of the outdoor unit is blocked by a cardboard or a plywood panel, and the front of the outdoor unit is blocked by the closed window or other obstacles. Clear the above obstacles from the outdoor unit.
	Q	**It generally works properly. But, when it's considerably hot, it goes off during operation.**
	A	It occurs when the outdoor unit is exposed to direct sunlight and the hot air does not escape properly. Set up a sun blind over the outdoor unit and clear the neighboring obstacles from the outdoor unit to provide good ventilation. When it goes off frequently during a heat wave, it would prevent the turn-off and increase the cooling capacity cleaning the outdoor unit or spraying some water to the heat exchanger.
	Q	**The remote controller won't operate.**
	A	When the batteries run out or the transmitter or receiver of the remote controller is blocked by obstacles, change the batteries or keep the obstacles away from the controlling area. Also, the remote controller may mot work under intensive light from a 3-wave length lamp or a neon sign due to the EMI. In this case, take the remote controller closer to the receiver.

Classification	Class	Description
Installation	**Q**	**Who installs the air conditioner? (Relocation/Re-installation)**
	A	When relocating or re-installing the air conditioner, make sure to contact Samsung Electronics Service Center or Authorized Service Agent and have them to do the job. (If not, it could cause personal injury or product damage.) The cost for the relocation/re-installation of the air conditioner is subject to the customer's expense. There is a cost table. But, our service engineer needs to visit to total up the cost correctly. When you move in, make sure to contact Samsung Electronics Service Center or Authorized Service Agent in advance to streamline the process.
	Q	**Is it possible to install the outdoor unit outside?**
	A	It is possible to install it at a designated place in the apartment or on the rooftop nearby. But, it's illegal hanging an angle iron case with the outdoor unit in it outside the apartment. Also, it is illegal obstructing passers-by with the outdoor unit installed outside.
	Q	**What can be done to install the outdoor unit facing the road because it is a commercial building?**
	A	The following is an excerpt from building code going into effect from JUNE 1 st 2005. "The exhaust pipe of a cooling or ventilation facility installed in a building adjacent to the streets of commercial or residential areas shall bel installed higher than 2 m to prevent the exhaust air from blowing directly to passers-by and the current facilities shall be corrected by MAY 31 st 2005." So, please install it higher than 2 m or not to blow the hot exhausting air directly to passers-by.
	Q	**What about installing a windscreen during installation not to blow hot air directly to passers-by?**
	A	When the hot air from the front of the outdoor unit is blocked, the product's performance will be affected and it will fail to operate properly. So, keep it at least 300mm away from its surrounding walls and give it good ventilation.

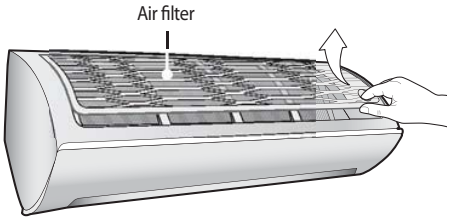
12-4 Cleaning /Filter Change

12-4-1 Cleaning your Air Conditioner

To get the best possible use out of your air conditioner, you must clean it regularly to remove the dust that accumulates on the air filter.

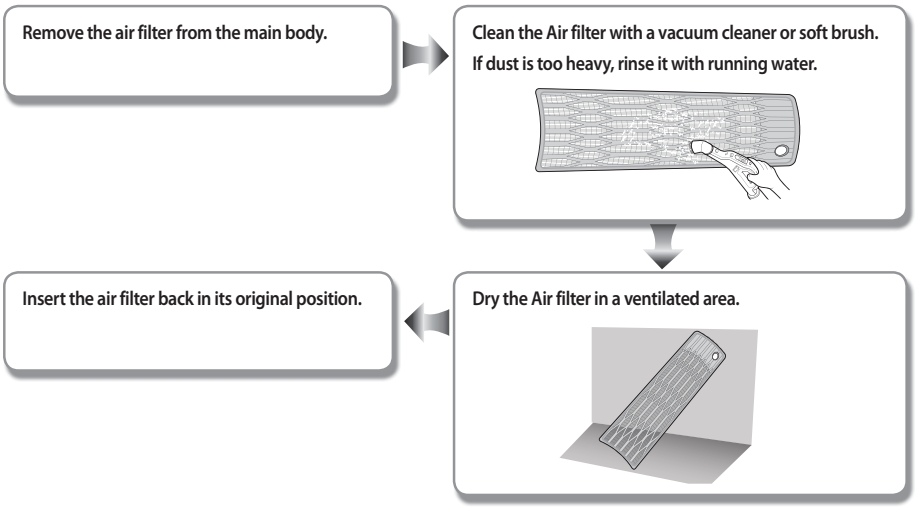
Removing the Air filter

There is a hole on the bottom right side of the filter. Put your finger in that hole to get a grip on the filter and slightly push it up to release the hooks from the bottom side. Then, pull it down to remove the filter from the main body.



Cleaning the air filter

Washable foam based air filter captures large particles from the air. The filter is cleaned with a vacuum or by hand washing.


Remove the air filter from the main body.
Clean the Air filter with a vacuum cleaner or soft brush.
If dust is too heavy, rinse it with running water.
Dry the Air filter in a ventilated area.
Insert the air filter back in its original position.

NOTE

- Clean the Air filter every 2 weeks. Cleaning term may differ depending on the usage and environmental conditions. In dusty area, clean it once a week.
- If the Air filter dries in a confined (or humid) area, odors may generate. If it occurs, re-clean and dry it in a well-ventilated area.
- When the filter clean reminder is on, please press the 2nd F button and then press the ECO Run button on remote controller.

12-5 Installation

12-5-1 Before Installation

Keep the air conditioner outlet and inlet free from its surroundings.
In case of installation, keep the symmetry and fix it to prevent vibration.
The pipe length shall meet the standard as far as possible.

12-5-2 Installation Procedure

■ Location

Install the product in an area to guarantee the best cooling effect, convenience of piping and electric work, and inexistence of vibration or wind.

■ Wall Drilling

Drill the wall downward in a diameter of 60 to 65mm.

■ Fixing Indoor Unit & Outdoor Unit

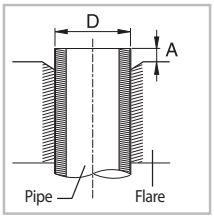
Fix the air conditioner indoor unit securely to the wall. Secure the outdoor unit in a suitable position.

■ Pipe Spooling & Connectingt

You shall cut the pipe with a pipe cutter and grind all the burrs of the cut surface.
pipe expansion may continue until the pipe surface becomes uneven or torn apart.
Be sure to use a torque wrench to tighten pipes or flare nuts.

<Torque & Depth>

Outer Diameter (D)	Torque(kgf·cm)	Depth(A)
ø6.35 mm(1/4")	140~170	1.3 mm
ø9.52 mm(3/8")	250~280	1.8 mm
ø12.70 mm(1/2")	380~420	2.0 mm
ø15.88 mm(5/8")	440~480	2.2 mm
ø19.05 mm(4/4")	9900~1,210	2.2 mm



■ Leak Test

Put an inset gas like nitrogen in the outdoor unit pipe and put soap bubbles or other test liquids on the pipe surface for the leak test.

■ Drain Hose Connecting

Install the drain hose downward to drain water naturally. Be sure to pour water into the hose to check if it drains well.

■ Electric & Earth Work

Electric and earth work shall meet the "Electric Facility Technology Standard" and the "Internal Wire Regulation" of the Electric Business Laws.

■ Inspection & Trial Run

Upon completion of the tests, you shall make a trial run while you explain the main functions of the air conditioner to finish the installation.

12-6 Installation Diagram of Indoor Unit and Outdoor Unit

12-6-1 Air-Purge Procedure

1) Connect each assembly pipe to the appropriate valve on the outdoor unit and tighten the flare nut.

2) Connect the charging hose of low pressure side of manifold gauge to the packed valve having a service port (3/8" Packed valve) as shown at the figure.

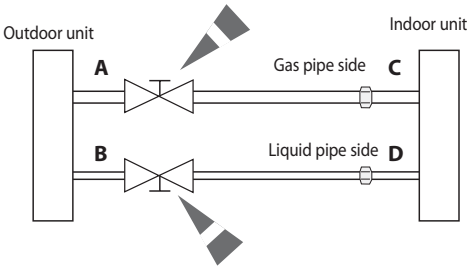
3) Open the valve of the low pressure side of manifold gauge counter-clockwise.

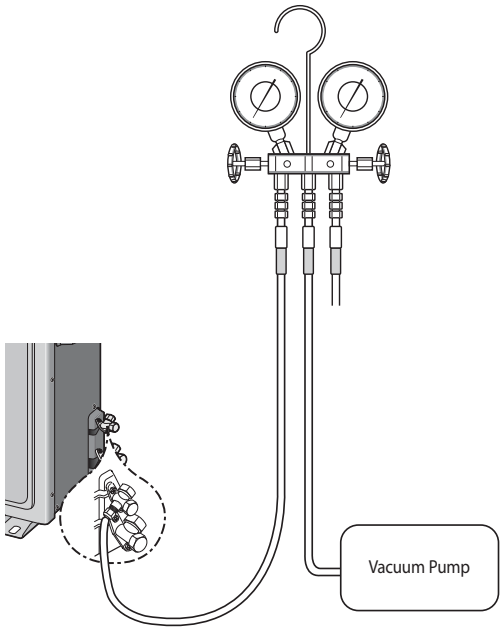
4) Purge the air from the system using vacuum pump for about 30 minutes.
   - After that, please recheck that pressure is stabilized.
   - Close the valve of the low pressure side of manifold gauge clockwise.
   - Remove the hose of the low pressure side of manifold gauge.

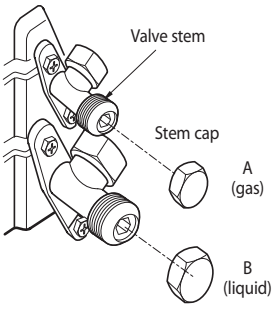
5) Set valve cork of both liquid side and gas side of packed valve to the open position.

6) Mount the valve stem nuts to the 2 way and 3 way valve. And mount the service port cap to 3 way valve.

7) Check for gas leakage.
   - At this time, especially check for gas leakage from the 3 way valve's stem nuts, and from the service port cap.







12-6-2 "Pump down" Procedure

Pump down will be carried out when an evaporator is replaced or when the unit is relocated in another area.

1) Remove the caps from the 3 way valve and the 3 way valve.

2) Turn the 3 way valve clockwise to close and connect a pressure gauge (low pressure side) to the service valve, and open the 3 way valve again.

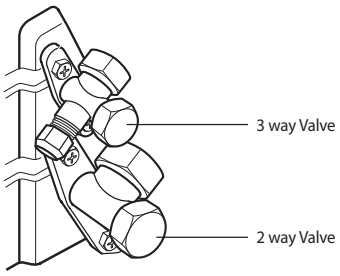
3) Set the unit to cool operation mode. (Check if the compressor is operating.)

4) Turn the 3 way valve clockwise to close.

5) When the pressure gauge indicates "0" turn the 3 way valve clockwise to close.

6) Stop operation of the air conditioner.

7) Close the cap of each valve.



Remarks

Relocation of the air conditioner

- Refer to this procedure when the unit is relocated.
- Carry out the pump down procedure (refer to the details of 'pump down').
- Remove the power cord.
- Disconnect the assembly cable from the indoor and outdoor units.
- Remove the flare nut connecting the indoor unit and the pipe.
- At this time, cover the pipe of the indoor unit and the other pipe using a cap or vinyl plug to avoid foreign material entering.
- Disconnect the pipe connected to the outdoor unit.
  At this time, cover the valve of the outdoor unit and the other pipe using a cap or vinyl plug to avoid foreign material entering.
- Make sure you do not bend the connection pipes in the middle and store together with the cables.
- Move the indoor and outdoor units to a new location.
- Remove the mounting plate for the indoor unit and move it to a new location.

SAMSUNG ELECTRONICS

GSPN (GLOBAL SERVICE PARTNER NETWORK)

Area	Web Site
Europe, CIS, Mideast & Africa	gspn1.samsungcsportal.com
Asia	gspn2.samsungcsportal.com
North & Latin America	gspn3.samsungcsportal.com
China	china.samsungportal.com

This Service Manual is a property of Samsung Electronics Co., Ltd.
Any unauthorized use of Manual can be punished under applicable International and/or domestic law.

© Samsung Electronics Co., Ltd. August. 2013.
Code No. AC-00045K_1